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THE RELATIVE MERIT OF ADVERTISEMENTS

A PSYCHOLOGICAL AND STATISTICAL STUDY

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BY

EDWARD K. STRONG, JR., PH.D.

ARCHIVES OF PSYCHOLOGY

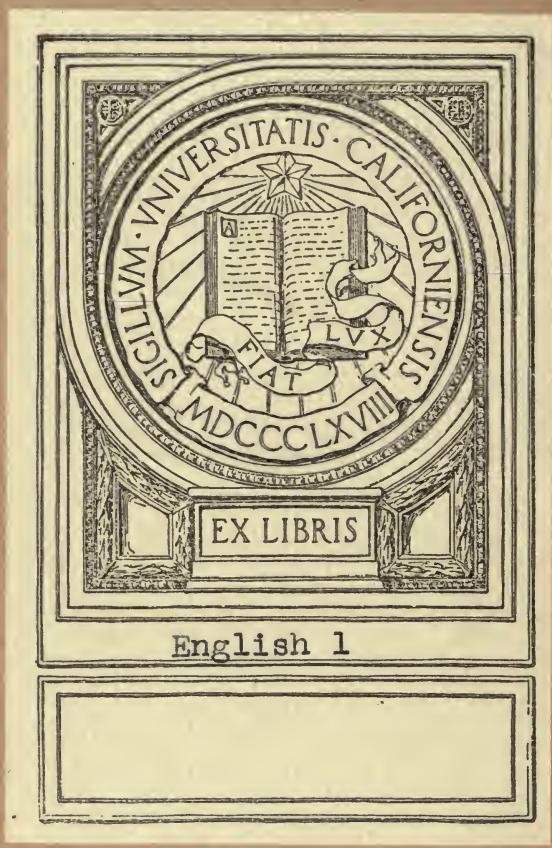
EDITED BY

B. S. WOODWORTH

No. 17, JULY, 1911

COLUMBIA CONTRIBUTIONS TO PHILOSOPHY AND PSYCHOLOGY
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THE RELATIVE MERIT OF ADVERTISEMENTS

INTRODUCTION

ADVERTISING is an integral part of business to-day and is rapidly becoming more and more important. There seems to be no limit either to the extent of its usefulness or to the ingenuity displayed in presenting its message in new and attractive forms. Its tremendous significance financially is evident from the fact that, according to different estimates, from \$600,000,000 to \$1,000,000,000 are spent in this country every year in various phases of advertising. Surely, any aspect of our national life involving such sums warrants careful and detailed study.

One of the few things that all advertisers are agreed on with regard to their business is that a large percentage of the money and energy expended is wasted. The International Correspondence School, for instance, estimates that 18 per cent. of newspaper advertisements are "entirely worthless" and that only 15 per cent. can be called "good advertisements." A very conservative estimate of the yearly loss in this country would be \$200,000,000. Whatever the loss it is not due simply to inexperience and carelessness. Even among the best laid plans prepared by "experts" losses occur.

One of the reasons for this condition is the extreme difficulty of estimating even approximately the actual results from advertising campaigns. To determine the value of any one of a set of advertisements used in a series is almost impossible. "Keyed" results of various types are used, but there is the greatest diversity of opinion as to their value. Undoubtedly experience is the best teacher. But where there are so many factors to be evaluated and where they are combined in such complex ways it is difficult to estimate their worth, especially when the experience of others can not be readily compared with one's own. And besides this difficulty, there is the great objection to relying entirely on experience as a guide in the fact that it leads us to wisdom only after we have spent our money. Knowledge so acquired is of value only as applied to "next time." This situation has prompted the recent discussion of establishing an Institute for Advertising Research. It certainly seems to the author that such an institute would be of incalculable value, even if it did no more than to present, in as complete a form as possible, the lessons that have been learned in the past.

The main object of this report is to determine whether psychology can be of any value in this situation, *i. e.*, whether psychological tests can be employed to estimate the value of advertisements before they have been actually used. If so, to what extent?

The writer believes that both of these questions have been most favorably answered by the results of the experiments herein reported. It has been found that the methods he has used give results in close agreement with known advertising returns. Certain principles as to the structure and the nature of successful advertisements have also been deduced. The report then, while it is of interest to psychology in that it is a discussion and development of a method of research, and, to a slighter degree perhaps, in that it throws some light upon principles of action in man, is of great interest to advertising in that it establishes the relative value of different appeals in the sale of commodities.

The material presented advances from simple experiments to those which are more complex and refined. The writer considers the discussion of vacuum cleaner and piano advertisements in Chapters III. and IV. as preliminary in nature. It is of value here in that it demonstrates the validity of the whole method of procedure through the consistency of its results with those of the more refined experiments. Chapters V. and VI. deal with the *order* of preference of different advertising appeals for breakfast food and toilet soap, but not with the actual *amount* of their value. Chapter VII. presents a study of fifty advertisements in which the *difference in amount* of value of one advertisement from another is given. As this is the first experiment of the kind to attempt such results, its precise validity remains still to be established. However, the writer does feel justified in claiming that the results closely approximate to the actual conditions.

CHAPTER I

SUMMARY OF PREVIOUS EXPERIMENTAL WORK IN THE PSYCHOLOGY OF ADVERTISING

THERE are three distinct lines of investigation in advertising from the psychological standpoint. First, we have the general set of factors and their specific values which enter into the production of the stimulus (whether it be reading matter, electric signs, or samples); second, the general factors operating in fixating the impression—the factors of association and memory; and third, the factors operating to influence the response to the original stimulus. The advertising man states the several problems as follows: "Attract attention; arouse interest; create desire; and effect a sale." None of these divisions, of course, pertains to disparate processes but only to convenient and useful phases of a single reaction. This report is concerned with the factors which operate to influence response to stimuli or, in other words, the factors which create desire. Factors of attention, memory, etc., are not specifically considered.

Practically all the work so far carried on by psychologists in their investigation of advertising relates to the first line of research—the endeavor to determine the "attention-value" of colors, of different type, of preferred positions on the page, etc.

Gale¹ considered the value of relevant and irrelevant words and cuts and found for both sexes "a constant and decided increase in the value of relevant words with each consecutive flash of a certain advertisement." Relevant words and cuts were preferred to irrelevant. "The men were proportionately more caught by words. Similarly on the question of relevancy and irrelevancy, the female attention was more susceptible to irrelevancy, as it was also to cuts, than was the masculine attention." He also considered the relative attention-value of different parts of the page, of different sizes of print, and of different colors with reference to black and white background.

Scott² in a number of experiments considered the attention-value of large and small advertisements. He also compiled various data in regard to the average time spent by various groups in reading newspapers, the per cent. of persons who read advertisements in magazines, etc.

¹ H. Gale, "Psychological Studies," 1900, Chap. II.

² W. D. Scott, "The Psychology of Advertising," 1908.

Starch³ also considered the relative attention-value of the various pages and quarter-pages of a magazine.

There are to my knowledge but three attempts to investigate the factors operating to influence the response from the advertisement. Gale⁴ selected four articles (soap, pianos, house-furnishings, and clothes) and wrote six different advertisements for each article, "each advertisement emphasizing one or two special reasons for dealing with that firm. Thus the special points of cheapness, forced sale, age, reliability, credit, prizes, testimonials, qualities, prices, home manufacture, etc., were made. As all the advertisements were fictitious as to names and firms the readers were asked to imagine themselves in a new city where they needed to go out and buy each of the articles, and from these advertisements they must select the place where they would go first, then their second choice, third choice, etc., to the sixth place, which would attract them least of all. Then especially they were to give their reasons for each choice. Replies were obtained from 72 males and 33 females. A minority of the subjects were college students, the remainder were friends and relatives of the students."

The advertisements for the soap were as follows:

- No. 1. Our velvet soap is attractive to touch, sight, and odor.
- No. 2. Colonial soap. Richard Endicott and Co. Founded in 1831.
- No. 3. Soap Special Sale at "Swanson's Mammoth."
 - "Lilly"—6 cakes for 34 cts.
 - "Queen's Own"—6 cakes for 37 cts.
 - Omaha Packing Co.'s new "Expansion"—6 cakes for 29 cts.
 - Texas Cattle Co.'s "Get there"—6 cakes for 23 cts.
 - Swanson's "Pride"—6 cakes for 21 cts.
 - "Gold Standard"—6 cakes for 19 cts.

Limit of one dozen to each purchaser.

- No. 4. America Soap. Government Standard. Official tests by U. S. chemist shows less than a half of one per cent. of impurities. Eagle Soap Co.
- No. 5. Free. A durable toy balloon given away for three days with each purchase of four cakes of Universal Soap.
- No. 6. Patronize Home manufactures. Flour City soap at their home store.

I have taken the data given for the soap advertisements in Gale's Table XVI. and have calculated them on the basis of one hundred subjects so as to equalize the results from the unequal number of men and women subjects. These data were then handled in the same manner as my own, *i. e.*, give the position of the average judgment for each advertisement. They are as follows:

³ D. Starch, "The Psychology of Preferred Positions," *Judicious Advertising*, April 5, 1910.

⁴ *Loc. cit.*

Adv.	Men	Women	Men and Women
No. 4	2.46	2.29	2.38
No. 2	2.69	2.11	2.40
No. 6	3.22	3.49	3.36
No. 1	3.50	3.49	3.50
No. 3	3.68	4.06	3.87
No. 5	4.62	5.47	5.05

The "old firm" and "pure soap" appeals are then ranked first, "home industry" and "attractive" (according to Gale) or "quality" appeals stand mid-way, and the "special sale" and "premium" appeals are rated last.

Gale had each subject state the reason he assigned each advertisement its respective place and based his results on these "reasons." His summary of the above data is as follows: "It is seen that the age of the firm is the reason most given for choosing the first place; then follows government test and cheapness with the men, while purity and generally 'attractive ad.' with the women. The reason most unanimously given for the last choice is the prize offered in No. 5; it being characterized so largely by the women as a fake is due to this also. Cheapness is the second largest reason given for last choice, and the first reason for next to the last choice. Between these reasons determining the extremes of first and last choice is that of patronizing home manufactures, which appears strong for a third and fourth choice."

Gale does not give all his data for the other three articles studied, consequently an accurate comparison can not be made between his results and the writer's. His general summary of the appeals in the four articles is as follows in a descending order of merit: (1) Age, (2) reliability, (3) attractive, good advertisement, (4) cheap bargains, (5) qualities stated, (6) prices stated, (7) style, (8) fake, brag. "Men were a little more influenced by age and women by reliability and by what they called an attractive or good advertisement. Contrary to expectations and to the information of experienced advertisers, it appears that cheapness influenced our male answers more in favor of an advertisement and the females more against an advertisement. About 60 per cent. of the answers for first choice were made from the age or reliability of the firm. This seems to show that they tried to substitute for their own want of experience with the firms the experience of the public who had dealt with them."

Scott, in his "Psychology of Advertising," in the section on The Laws of Progressive Thinking, gives the following data secured from letters in which the writers state their reasons for preferring a certain advertisement:

1. 607 for reliability of the firm or the medium or the goods, in the opinion of the writer.
2. 508 for money considerations.
3. 418 for the construction of the advertisement.
4. 408 because of the present need.

As I understand it, the above figures show the number of letters received during one month in which "the writers told which advertisements (of a certain magazine) they were most *interested* in and what it was in each particular advertisement which interested them." My own observations would indicate that factors of *interest* may be considerably different from the factors which lead one to *buy*, although, on the whole, they will correlate fairly high. They would further indicate that introspections as to why one is actually interested or led to buy are very difficult to obtain and take into account only a few of the many complex reasons.

Hollingworth⁵ prepared "fifty abstract appeals, each designed to reach a different interest, instinct, or line of argument and corresponding for the most part to the salient points of various widely differing sorts of advertising copy." Thirty women, mainly undergraduates, and twenty men of corresponding age and class arranged the 50 appeals in an order of merit with respect to persuasiveness. Following are samples of the appeals which were used. All were typewritten on separate slips of the same size.

1K6. *Scientific*.—Our 1K6 article is manufactured by approved scientific methods and scientifically tested processes by technically trained men working under the constant supervision of experts.

2B7. *Family Affection*.—A final day must come to every man and no one wants to see his children left dependent on mere accident. You owe a duty of provision and foresight to your family. A 2B7 will guarantee their comfort and security when you are gone.

"Certain sources of 'error' in such an experiment are at once obvious. (1) It is difficult to keep out of even these abstract appeals some suggestion of special reference. Thus the appeal to appetite will inevitably suggest food, some health appeals are strikingly medicinal in tone, and doubtless in most cases there is a more or less pronounced tendency to think of one article rather than another. (2) There is a certain feeling of self-consciousness and reserve in submitting honestly to such an experiment, a tendency to place too

⁵ H. L. Hollingworth, "Judgments of Persuasiveness," forthcoming paper in *Psych. Rev.* Besides this report Hollingworth has carried on a number of experiments with advertisements, one of which is reported in the following chapter in support of the method used throughout this report. A full account of these experiments can be found in his forthcoming book on "The Principles of Appeal and Response."

low certain appeals which bulk large outside of the laboratory, or a tendency towards ideal arrangement strongly suggestive of the inclination to give learned responses in association tests.

“The group of appeals, as a whole, falls into three rather sharply defined sections, the series breaking at values 15.2 and at 29.0 at which points there are wider gaps. These sections, moreover, correspond to qualitatively different groups of appeals.

“In the first group with value ranging from 4.0 to 15.2 fall the appeals to health, cleanliness, scientific construction, economy of time, appetite, increase of efficiency, safety, durability, quality, modernity, and family affection. The general characteristic of these appeals is that they are strictly relevant in tone, describe the article precisely or point out some specific value, or ‘selling point’ which it possesses.

“In the second group, with values ranging from 21.0 to 29.0, fall the appeals based on the general reputation, guarantee or assertion of the manufacturer, and on a set of specific and more or less social feelings and interests, such as sympathy for others (not family), courtesy, invitation, elegance, hospitality, sport, cheapness, etc. The characteristic of these appeals is that they do not relevantly describe the article but try to connect the article with some specific instinct or effective conception. And these appeals are distinctly less personal, more social, than those of the first group.

“In the third section, with values ranging (with one exception) from 41.0 to 45.8, fall the rather vague appeals to avoid substitutes, to civic pride and clan feeling, social superiority, recommendation the ideals of fashion, foreign origin, and finally the appeal of beauty. The chief characteristic of this group seems to be that while, as in the second group the statement is semi-relevant or incidental, the feeling appealed to is indeterminate and general.

“The only considerable sex differences, cases in which the difference in position is say 5 places or over, are on the appeals entitled appetite, safety, nobby, family affection, sympathy, elegance, and recommendation, which are placed higher by the men, and on time saved, guarantee, medicinal, substitutes, efficiency, durability, quality, and hospitality, which are placed higher by the women.”

The second source of error pointed out by Hollingworth must largely account for the very low position of such appeals as social superiority, ideals of fashion, and beauty. The very fact that they are placed last would support the view that they should be ranked extremely high, if they are out of place at all, as all experiments of this order clearly show that the two extremes of an order of merit arrangement are definitely determined whereas the remainder of the series is composed of the “indifferent” appeals.

CHAPTER II

ON THE VALIDITY OF THE "ORDER OF MERIT" METHOD AS APPLIED TO ADVERTISING

SECTION 1. *General Survey of the Method*

THE experimental work of this report has all been done with the use of the so-called "Order of Merit Method." The peculiar point of this method is that a series of stimuli is arranged according to some designated order by each subject. The great advantage of this method over that of the more generally used one of "Paired Comparison" is the comparative ease and quickness with which a large number of stimuli may be graded on the basis of the given criterion. This method facilitates the obtaining of results from a large number of subjects, thus avoiding the small "select" groups so commonly used in psychological experiments. A second feature of the method, not yet appreciated by many psychologists, is the ability to secure judgments upon very complex stimuli. Not only in these cases may the stimuli be too complex to be analyzed into their component parts but the resulting judgments may also be based on so many details that they too can not be analyzed through introspections. Yet with all these complications a series of judgments may be secured that will not vary greatly for the same individual if repeated after considerable lapses of time. In fact, one of the striking points of the method is this reliability of the judgments.

Cattell was the first to make use of the "order of merit method" in his study of two hundred shades of gray.¹ Since then he has employed the method in the study of eminent and scientific men.² Sumner made a study of beliefs;³ Wells, a study of literary merit⁴ and of the variability of individual judgments;⁵ Norsworthy, a study

¹ J. McK. Cattell, "The Time of Perception as a Measure of Difference in Intensity," *Philos. Studien*, XIX., 1902.

² J. McK. Cattell, "Statistical Study of Eminent Men," *Pop. Sci.*, LIII., 357; "Statistics of American Psychologists," *Amer. Jour. of Psych.*, XIV., 310; "Statistical Study of American Men of Science," *Science*, N. S., XXIV., 621, 622 and 623; and "A Further Study of Men of Science," *Science*, N. S., XXXII., 827 and 828.

³ F. B. Sumner, "A Statistical Study of Belief," *Psych. Rev.*, V., 616.

⁴ F. L. Wells, "The Order, Position, and Probable Error of Ten Leading American Authors," *Columbia Univ. Cont.*, XVI., 3.

⁵ F. L. Wells, "On the Variability of Individual Judgments," "Essays Philosophical and Psychological in Honor of William James," 1908.

of the validity of judgments of character;⁶ Thorndike, a study of handwriting with special reference to the construction of a scale for quality of handwritings;⁷ Downey, a study of family resemblance in handwriting;⁸ and Hollingworth has made frequent use of the method in the study of advertising,⁹ and of judgment.¹⁰ In all these studies an order of preference was established. The question is, how nearly does such an order of superiority in "pulling-power" of advertisements approximate the known results? The following pages give some data on this point, *i. e.*, on the reliability of the method when applied to advertising appeals.

SECTION 2. *Application of the Method to Advertising Problems*

One experiment of Hollingworth's with advertisements is recorded here. It is with a set of Bullard Machine Tool Co.'s advertisements. A short review of the results of this experiment as compared with the returns recorded by the advertiser is given. Similarly, a short review is then given of (1) a set of fifty advertisements and then (2) a set of eight advertisements from the Packer Manufacturing Co.

SECTION 3. *Results from a Set of Lathe Advertisements*

There were five advertisements in the set of Lathe advertisements from the Bullard Machine Tool Co. They were tested by the order of merit method with respect to: (1) attention-value, (2) persuasiveness or "pulling-power," and (3) memory-value. Advertisement No. D consisted of a large cut, No. A contained the same cut but the advertisement was arranged so as also to present some "reason-why copy," advertisement No. E contained a smaller cut with radiating phrases descriptive of its special advantages, advertisement No. C contained a quarter-page cut and three-quarters of a page of "reason-why copy," and advertisement No. B contained a very small cut and very good "reason-why copy" surrounding it. Ten mechanics and engineering students were the subjects. The results are shown in Table I.

⁶ N. Norsworthy, "Validity of Judgments of Character," "Essays Philosophical and Psychological in Honor of William James," 1908.

⁷ E. L. Thorndike, "Handwriting," *Teachers College Record*, XI., March, 1910.

⁸ J. E. Downey, "Preliminary Study of Family Resemblance in Handwriting," *Psych. Bulletins*, Univ. of Wyoming, No. 1, 1910.

⁹ One of his minor experiments is reported in the following pages. See also, H. L. Hollingworth, "Judgments of Persuasiveness," forthcoming article in *Psych. Rev.*

¹⁰ H. L. Hollingworth, "Experimental Studies in Judgment; Judgments of the Comic," *Psych. Rev.*, XVIII., 2.

TABLE I

RESULTS FROM EXPERIMENT WITH BULLARD LATHE ADVERTISEMENTS¹¹

Advertisement	Order According to			Summary of Judgments as to Pulling-Power		Actual Order of Inquiries Rec'd
	Attention-Value	Memory-Value	Pulling-Power	Av. Average	Deviation	
A	2.0	4	4	3.0	0.8	4
B	3.0	2	2	2.6	1.7	2
C	4.5	1	1	2.3	0.9	1
D	1.0	5	5	4.4	0.8	5
E	4.5	5	3	2.7	0.7	3

Because of the very small cut in advertisement No. B, 4 subjects ranked it last or next to last with respect to "pulling-power," the other six ranked it first or second. As will be pointed out later, an advertisement of all reading matter or all picture will be ranked very high or very low by approximately one half of a group of subjects and the reverse by the other half. Advertisement No. C consists of about half picture and half reading matter and consequently appeals to both groups. The advertisements with large cuts, as No. A and No. D, have high "attention-value" but slight "pulling-power" or "memory-value." "The best advertisement, psychologically, is neither No. B nor No. C, but a combination of the two styles—as large a cut as possible for attention value and *definite, concise, pointed, underscored* 'copy' as in advertisement No. B. Such an advertisement would appeal to both types of mechanics, the visual and the audible," *i. e.*, those preferring picture-ads and those preferring "copy-ads."

This order of merit method does not, of course, give the actual amount of superiority of one advertisement over another, as found in business, but does give the order of superiority. When this order was compared with the actual number of replies for catalogues received by the Bullard Co. from each advertisement, it was found that the two orders agreed exactly. Advertisement No. C "pulled" 40 times as many replies as advertisement No. D, which was the poorest of the five, while it cost but one sixth as much as No. D. We have here then complete agreement between the results secured from the "order of merit method" and actual results in business.

SECTION 4. *Results from a Set of Packer's Tar Soap Advertisements*

As recorded in Chapter VII., a series of fifty Packer's Tar Soap advertisements were arranged according to the "order of merit"

¹¹ In every case throughout these experiments except with the Packer's Tar Soap Ads "1" represents the highest grade; the lowest grade will be equivalent to the number of advertisements used, *e. g.*, here it is "5."

method in the order in which they would lead the subject to buy the soap. Twenty-five subjects were employed. When the order was compared with the order submitted by Mr. Edward A. Olds, Jr., of the Packer Manufacturing Co., and with the one from the Blackman-Ross Advertising Agency, we found a high degree of similarity between the three orders. The resemblance between the experimental order and either of the other two is equal to a coefficient of correlation¹² of + .52. The resemblance between the order of the Packer Manufacturing Co. and the Blackman-Ross Agency is equal to + .64. There is then nearly as great agreement between the experimental order and that of the Packer Manufacturing Co. as between the latter and the agency, which is now handling their advertising business.

Eight advertisements were then chosen from the fifty for a more detailed study of the reliability of the "order of merit" method. The advertisement that *averaged* highest among the twenty-five subjects was first selected. It has a rank of + 64 on the experimental scale (see Table XXI.). Then seven other advertisements were so selected that there was approximately an interval of 10 points between each advertisement. The eight advertisements so chosen and their position on the scale given in parenthesis are as follows: No. 29 (64), No. 48 (54), No. 39 (44), No. 40 (34), No. 4 (24), No. 35 (14), No. 8 (2), and No. 19 (— 6). These advertisements were arranged in an order of merit by 100 subjects, 21 of whom were graduate men, 39 undergraduate men, and 40 undergraduate women. The ratio of 60 men to 40 women was preserved because the twenty-five subjects who sorted the entire fifty Packer's Tar Soap advertisements were composed of 15 graduate men and 10 undergraduate women. The maintenance of this ratio, however, introduced another source of error—the employment of undergraduate men, which from the results appears to be a more serious error than a deviation from this ratio would have been.

The directions given the hundred subjects for the sorting of the eight advertisements are as follows:

¹² To those unfamiliar with this term I might explain that a coefficient of correlation is a mathematical term expressing the relationship between two groups of data taking into account the specific variabilities of each datum from its central tendency. A coefficient of + 1.00 represents complete agreement between the two groups of data, a coefficient of — 1.00 represents complete reversal of this relationship, and a coefficient of 0 represents no relationship between the two groups other than that due to mere chance. For example, a coefficient of + .40 represents the relationship between the physical or mental traits in brothers and + .80 represents similarly the relationship of these traits in twins. (Cf. Thorndike, "Mental and Social Measurements," Chap. IX., or Whipple, "Manual of Mental and Physical Tests," pp. 27-46.)

DIRECTIONS

Look over these eight advertisements.

Then arrange them in the order in which *you* would *buy* the soap.

Take for granted that each advertisement represents a different make of soap.

Table II. gives the results of the 100 sets of judgments. The first section of the table gives the position of the *median*¹³ judgment with its average deviation (A.D.) for each of the eight advertisements as determined by the 21 graduate men. The second section gives the results for the 39 undergraduate men and section three gives the total judgment for the 60 men. Section four similarly gives the results for the 40 women, and section five for the

TABLE II

GRADES AND AVERAGE DEVIATIONS OF EIGHT PACKER'S TAR SOAP ADVERTISEMENTS

(In the first five sections a grade of "1" is the highest possible and "8" the lowest, in the last three sections a grade of "100" is the highest and "—100" the lowest.)

Advertisements	21 Graduate Men				39 Undergraduate Men				60 Men (Total)				40 Women				100 Subjects (Total)				25 Subjects	Packer Mfg. Co.	B. R. Agency
	No.	Med.	A.D.	Med.	A.D.	Med.	A.D.	Med.	A.D.	Med.	A.D.	Med.	Med.	A.D.	Med.	A.D.	Med.	A.D.	Med.	A.D.			
29	2.5	1.2	4.3	1.6	3.5	1.7	2.5	1.6	3.2	1.7	67	71	36										
48	2.7	1.2	2.3	1.5	2.5	1.4	2.3	1.3	2.4	1.4	54	100	33										
39	2.8	1.9	4.8	2.2	3.5	2.2	3.5	2.0	3.6	2.1	43	88	52										
40	3.8	1.7	3.7	1.2	3.7	1.4	4.9	1.5	4.1	1.6	35	73	6										
4	5.5	1.7	5.3	1.7	5.4	1.7	5.4	1.6	5.3	1.7	25	67	0										
35	5.2	1.1	4.1	1.9	4.8	1.7	4.8	1.7	4.8	1.7	11	58	— 8										
8	6.6	1.0	5.5	1.7	6.1	1.5	6.0	1.6	6.1	1.6	10	0	— 17										
19	7.0	1.2	7.4	1.1	7.3	1.2	7.0	1.4	7.1	1.3	— 10	—	6	— 17									

¹³ With a few exceptions the median has been used throughout this report instead of the average as a measure of the central tendency of the group. It may be defined as the measure (or datum) above which and below which are equal numbers of the separate measures (or data). It is a better expression of the central tendency of the group in these experiments for it is very much less influenced by extreme cases (or data). What we want here is the position to which an advertisement is assigned by the majority of persons, not the average of the good, bad, and indifferent judges. This the median gives whereas the average takes into account the quality of the judgment. In other words, erratic judgments influence the median less than they do the average. Another point in its favor is the ease with which it may be calculated. Cf. Thorndike, "Empirical Studies in the Theory of Measurements," pp. 1-4.

In this particular case the average as well as the median judgments support the above facts.

entire 100 subjects. Section six gives the average position and the median position as assigned by the twenty-five subjects (see Chapter VIII.). The figures in section six are not comparable with those of the other sections but do indicate the order of preference. This section also gives the position assigned these advertisements by the Packer Manufacturing Co. and the position assigned them by the Blackman-Ross Advertising Agency.

The 25 subjects grade them in the following order: No. 29, 48, 39, 40, 4, 35, 8, and 19. The Packer Manufacturing Co. place No. 48 first, No. 39 second, and No. 29 third and the remainder in the above order. The Blackman-Ross Agency place No. 39 first, No. 29 second, No. 48 third, and the remainder as above.

The 100 subjects rank No. 48 first (thus agreeing with the Packer Manufacturing Co.), No. 29 second, and the remainder as do the 25 subjects except that they rank No. 35 above No. 4. This interchange of positions of these two advertisements is found in all of the subgroups and also among individuals who served as subjects both among the 25 and 100. I believe, it is to be fully explained by the fact that advertisement No. 4 was badly torn at the start of the experiment with the 100 subjects and when mended became badly wrinkled. This injury to its appearance caused it to be ranked lower than it would have been if not torn. This particular discrepancy between the results of the 100 and the 25 subjects should not then be counted as a weakness in the reliability of the method. The 21 men in the first subgroup rank No. 29 slightly higher than No. 48, while the women reverse the order with a similarly slight difference. The median for these 61 subjects results in ranking both at 2.5 but if the men are weighted to give a ratio of 15 to 10, No. 29 is given a position of 2.44 and No. 48 a position of 2.50. As has been pointed out before, the introduction of the 39 undergraduate men to secure a ratio of 60 men to 40 women introduced the error of comparing one group of two "select" classes with a second group of three "select" classes. The superiority of No. 48 to No. 29 as shown in the results of the 100 is hence due to the use of undergraduate men as subjects—a glance at their median judgments makes this even more evident. It is very evident then, that, if a similar selection of subjects had been used and No. 4 had not been mutilated, there would have been complete agreement between the two experimental orders of preference.

However, considering the order of the 100 as obtained in the experiment, we have the following correlations between the four orders of preference:

Order of the 100 subjects and the order of the 25 subjects	+	.947
" " "	Packer Mfg. Co.	+.893
" " "	B-R. Agency	+.866
" 25 subjects	Packer Mfg. Co.	+.840
" " "	B-R. Agency	+.920
" Packer Mfg. Co.	"	+.866

It had been hoped that it would be possible to obtain some data which would throw light on the perplexing question whether with equal differences in preference between the advertisements one would obtain approximately equal difference on the scale. Due to the two constant errors, as pointed out above, this point can not be determined here.

SECTION 5. *Conclusion*

The results from the one short set of advertisements show perfect agreement with results as reported by the business house as to their relative "pulling-power." Similarly the results from a set of fifty advertisements show nearly as close agreement with either of two reports from advertising experts as do the two advertising experts agree with each other. When eight of these advertisements are used, we have an extremely high agreement between the two experimental results and a slightly less high agreement between either of the two experimental results and the two reports of the advertising experts. Since we have no data to the contrary, we must conclude that the method does give results closely in accord with actual advertising returns.

CHAPTER III

PRELIMINARY EXPERIMENTS

SECTION 1. *Experiment I*

FOUR sets of advertisements taken from current monthly magazines were used in this experiment. Each set consisted of ten advertisements of the same commodity, namely, vacuum cleaners, pianos, breakfast foods, and toilet soap. (On Plates I. to IV. are shown photographs of these forty advertisements.) Ten subjects, including myself,¹ judged the advertisements in each set and arranged them in the order as to their merit in creating a desire for the article advertised. The advertisement that displayed the article most to be desired was ranked "1," while the advertisement that displayed the article least to be desired was ranked "10." We then have ten judgments upon each of the four sets of ten advertisements. The ten subjects consisted of 3 graduate students in psychology, 1 graduate student in economics, 2 college graduates engaged in engineering work, 1 clerk in an engineering office, 1 negro elevator-man, 1 senior at Barnard College, and 1 middle-aged woman. (The data of this experiment will be considered in connection with the following experiment.)

SECTION 2. *Experiment II*

This experiment was presented to the students in Psychology 7-8 at Barnard College during April, 1910, as one of the regular experiments of the course. Below is the wording of the instructions as given.

THE PSYCHOLOGY OF ADVERTISING

Apparatus.—There are in this experiment three groups of advertisements. Each group contains ten different advertisements dealing with a particular commodity.

Procedure.—Consider each group entirely by itself and in the following order: (1) pianos, (2) vacuum cleaners, and (3) breakfast foods.

Read through the ten advertisements of the first group and then arrange them in a descending series of merit as to *persuasiveness*, so that the advertisement on the top of the pile (when you are through) will represent the article you most prefer (as judged from the advertisements themselves and not from previous experience); so that the second advertisement in your pile will represent

¹ At that time I had no idea how the results would turn out and so could serve as well as any one else as a subject.

One Dollar

RICHMOND

In Your Home

the article which you next prefer, etc.; until you have the advertisement at the bottom of the pile representing the article which you least desire. Then consider the second group in the same manner and then the third.

“Persuasiveness,” as used here, may be explained thus: The most persuasive advertisement would show the article you would choose out of the ten if you had to base your choice solely upon the information supplied you in the ten advertisements.

When you have finished sorting the three groups report to the instructor and receive further instructions.

The above comprised Sheet No. 1. This was given to the student together with the three sets of advertisements. Only after they had completed their judgments was Sheet No. 2 given them.

THE PSYCHOLOGY OF ADVERTISING. SHEET NO. 2

Results.—Record the order of your preference of each group by noting the number of the advertisement as given in red pencil on the back of each advertisement.

State definitely, if possible, why you prefer the advertisements in the above order, noticing especially the first three and the last three.

Conclusions.—Does the reading-matter or the picture interest you the more in the article? Which convinces you the more as to the value of the article?

Do you feel any confidence in your arrangement as to preference?

What would constitute your ideal of an advertisement for (1) a piano and (2) a breakfast food?

The three sets of advertisements used here were the same as are shown in Plates I. to III. and as were used in Experiment No. 1. The set of toilet soap advertisements of Experiment No. 1 was, however, not used again. The data used below were from the first twenty women in the class to complete the work.

Table III. gives the average judgment of the 10 subjects of Experiment No. 1 and the 20 subjects of Experiment No. 2 together with their average deviations.

SECTION 3. *Experiment III*

This experiment served mainly as a preliminary study to ascertain if definite results might be obtained from “made-up” advertisements. It was made necessary due to the recognition shown in Section 4 of this chapter that there was a different reaction to “picture” from “non-picture” advertisements. And as it was deemed well-nigh impossible to classify motives as portrayed in pictures, it was judged best to confine the remainder of the study to “non-picture” advertisements.

The experiment consisted in the judging of three sets of ten advertisements each pertaining respectively to vacuum cleaners,

TABLE III

DATA FROM EXPERIMENTS I. AND II. GIVING GRADES AND THE AVERAGE DERIVATIONS FOR THE FOUR SETS OF TEN ADVERTISEMENTS

Ten Vacuum Cleaner Ads.					Ten Piano Ads.				
Ad.	10 Subjects		20 Subjects		Ad.	10 Subjects		20 Subjects	
No.	Av.	A.D.	Av.	A.D.	No.	Av.	A.D.	Av.	A.D.
1	3.3	1.4	4.7	2.3	4	4.4	1.8	6.5	2.6
7	3.6	2.2	5.0	2.3	8	4.5	2.3	5.9	2.2
4	5.3	2.6	5.4	2.5	1	4.6	2.2	4.7	2.5
3	5.5	2.0	5.5	2.4	5	5.2	2.4	5.3	2.9
10	5.5	2.6	5.0	2.2	7	5.4	2.1	5.7	2.2
5	5.6	1.5	6.7	2.0	2	5.7	3.4	5.2	2.0
8	5.8	1.8	5.6	2.6	10	5.8	1.9	5.2	2.6
6	6.6	2.5	7.1	2.2	6	6.1	2.3	4.0	2.1
9	6.9	2.3	5.3	2.4	9	6.1	3.7	6.6	2.6
2	6.9	3.1	4.5	3.1	3	6.8	2.0	6.7	2.5

Ten Breakfast Food Ads.					Ten Toilet Soap Ads.				
Ad.	10 Subjects		20 Subjects		Ad.	10 Subjects		20 Subjects	
No.	Av.	A.D.	Av.	A.D.	No.	Av.	A.D.	Av.	A.D.
2	3.7	3.0	3.9	3.0	10	2.7	1.2		
3	3.9	1.9	4.2	1.8	3	3.6	2.4		
7	4.8	1.8	6.5	1.4	9	4.8	2.0		
10	5.4	2.7	4.7	2.5	1	5.0	1.0		
6	5.5	2.3	5.2	1.6	2	5.0	2.2		
4	5.9	2.3	6.0	2.3	5	5.3	2.0		
9	6.1	2.3	6.5	2.9	6	5.6	2.0		
1	6.2	2.4	4.7	3.4	8	6.1	1.9		
8	6.3	1.8	6.4	2.6	7	8.2	1.6		
5	7.2	2.4	7.2	1.4	4	8.7	1.5		

pianos, and breakfast foods. The aim was to so word each advertisement as to suggest but one motive and that the characteristic statement of the corresponding advertisement in Experiment No. 1. In a few cases the writer's own words were substituted for some phrase or they were given in an endeavor to state in words the idea, he conceived the picture in the advertisement was meant to convey. The numbering of the advertisements corresponds respectively with the numbering in Experiment No. 1. The ten subjects and the directions for their judgments were the same as in that experiment.

Following are the 30 "made-up" advertisements as used in this experiment.

1. THE TEN VACUUM CLEANER ADVERTISEMENTS

1. Any one, who can afford a broom, can now afford the best Electric Suction Cleaner made.

Vacuum Cleaner No. 1 costs less per month for electricity than the average family spends for brooms.

Its total cost is less than the cost of one single annual house-cleaning, to say nothing of saving the wear and tear which house-cleaning brings to the furniture.

2. ONE DOLLAR puts the *Vacuum Cleaner No. 2* in *your house*.

Our guarantee is absolute. If, within one year, the machine breaks or shows defect, it will be replaced with a new one. This is the guarantee of a \$3,000,000 company.

You are paying the price of a Suction Cleaner now, anyway, whether you have one or not, paying it in needless house-cleaning, paying it in hard sweeping and dusting, paying it in the damage which dust does to your furniture.

A single dollar will save this waste.

3. Get the *dust out of your home*—it's dangerous.

No member of your family is wholly safe from contagious diseases until every particle of *dirt* and *dust* is removed. To be safe, your home should be *dustless*.

Please remember this one fact—you can not have a *dustless home* without *Vacuum Cleaner No. 3*. Thorough house-cleaning is impossible without it.

4. Here you have an Electric Suction Cleaner that weighs but *ten pounds*—instead of *sixty*.

With it you may clean by electricity without lugging a 60- to 80-pound machine from room to room—upstairs and down—the first really portable machine to be placed on the market.

Vacuum Cleaner No. 4 does all that any cleaner or suction cleaner can do.

5. See other machines at work, if you like. Compare them with *Vacuum Cleaner No. 5*. Note its superiority to them in its *light weight*, hence easily carried about; the *ease with which* the attachments are made; and the *ease with which it is operated*.

A boy or girl can clean house with it far better than several strong men and women can clean house without it.

6. Thousands of persons who have ordered *Vacuum Cleaner No. 6* have been unable to get their machines except by waiting two or three weeks or longer.

Our factory, which, when we began advertising in April, 1908, had a capacity of 30 machines a day, has literally been swamped. So helpless were we under the flood of orders that we were forced to suspend advertising for two months.

Now, however, we are able to assure the public of our ability to fill all orders on the day received.

We now have over 100,000 sq. ft. of floor space, with an output of 500 machines a day and the ability to increase it to 1,000 machines, or about 30,000 per month.

7. *A Pound of Flour*.

We scattered a pound of flour over a clean rug and worked it right down into the fabric.

Then we swept the rug with a broom for ten minutes and recovered just 2 ounces of flour mixed with nap.

But five minutes' work on the same rug with the *Vacuum Cleaner No. 7* took up 12 ounces more, six times as much flour in half the time, and not a shred of nap.

8. No home can really be *healthfully clean* without *Vacuum Cleaner No. 8*.

Think of the countless number of *disease germs* in the dust of the ordinary room. Would you free yourself of this ever-present danger?

No other invention has ever done so much for absolute *safety* in the home by doing away with *dirt* and *disease*.

9. What the Bath Tub means for *Personal* Cleanliness, *Number Nine Vacuum Cleaner* means for *Household* Cleanliness.

It was not so many years ago that such a thing as a household bath tub was unknown among any class.

The standard of *household* cleanliness now has been raised just as high as the standard of *personal* cleanliness. The grand semi-annual housecleaning is just as much out of date as the grand weekly bath. The most thorough possible cleaning every day—that is the new standard for home as well as person.

10. *Up from Slavery.*

Up from *servitude*—up from the three D's, Dirt, Disease, and Drudgery. *Vacuum Cleaner No. 10* saves the *woman*. It is the new servant in the house.

2. THE TEN PIANO ADVERTISEMENTS

1. *Piano No. 1* is associated in the minds of all, who know it, with artistically furnished rooms, with beautiful surroundings of sculpture and painting, and all that goes to make a cultured home.

2. *Piano No. 2* may justly be termed one of the *Institutional Products* of America.

Throughout almost four decades of the last century and of the opening decade of the present, all the thought, effort, and experience of the original founders and their direct family successors have been steadfastly consecrated to the intense purpose of making the *Best Piano* that human hands could fashion.

3. The *Tone-Poetry* of Chopin—

his inmost soul's dream-images are at last perfectly revealed through the exquisite *tone shadings* of *Piano No. 3*.

4. *Start the Children Right.*

To accustom the delicate and maturing hand of the child to the great possibilities of a properly built piano action, such as *Piano No. 4* possesses, not only facilitates correct technique, but avoids the necessity of subsequently unlearning faults that retard correct advancement.

5. Why pay \$700 to \$800 for an Upright Piano when *Upright Style M* of *Piano No. 5* is offered for the moderate price of \$550.

We are able to make this extraordinary price because of the great number of pianos we are handling and because we sell direct from factory to consumer.

6. The desire of so many to have a grand piano has induced most makers to produce tiny "grands"—so little that they serve only to accent the value of the upright. The size of these pianos is a concession to convenience and fashion—a fad—that does not consider musical effect. When a piano is less than 5 feet 10 inches in length it ceases to be a grand piano. It is an arrested development. It is only a piece of furniture.

Piano No. 6 has all the characteristics of our great concert grands, in modified volume. It is a Real Grand Piano: it occupies a distinctive position between the uprights and the larger grands: there is a *scientific reason* for its size, 5 feet 10 inches.

7. *The Many Moods in Music* insure to more people *happy, self-forgetting recreation* than any other form of entertainment.

The pleasure of a great and soothing art is trebled by *Piano No. 7*.

8. Where others have failed to build a small yet perfect Grand Piano, meeting present-day requirements, the *House of Piano* No. 8, after years of careful research and experiment, has succeeded in producing

The World's Best Grand Piano
in the small size of
5 feet, 2 inches.

9. The *World's Greatest Women Musicians*, Chaminade, Carreno, and Nordica use and unqualifiedly endorse *Piano* No. 9.

10. It is not through the glittering treble nor by way of the sonorous bass that a musician gets into the tone:

In the *Middle Register* lies the soul of the instrument, from which composers draw their inspiration. Extreme octaves serve for brilliancy, to color a harmony, or to glorify a climax.

Consequently the *Middle Register* has been especially considered in *Piano* No. 10.

3. THE TEN BREAKFAST FOOD ADVERTISEMENTS

1. When you want to eat a mighty appetizing breakfast food remember *Breakfast Food* No. 1.

Children can hardly wait for breakfast; it's the same with adults.

2. In an article published in the *Saturday Evening Post* of March 10, 1909, Dr. Smith, the great medical authority on foods, says, about brain and muscle building:

"There is one kind of food that seems to me of marked value as a food to the brain and to the whole body throughout childhood and adolescence (youth).

"This food is the most nutritious of all the cereals, being richer in fats, organic phosphorus and lecithins."

It is from this cereal, exclusively, that *Breakfast Food* No. 2 is made.

3. *Breakfast Food* No. 3, when served alone, seems as good as anything can be.

But try serving it in a dish of *Sliced Bananas*.

Then judge if any breakfast dish was ever more inviting.

4. Sometimes the *men* know best.

All *men* like *Breakfast Food* No. 4.

Why not try some?

5. Lack of success in life is due to Mental Dulness.

Mental Dulness usually comes from imperfectly nourished brains.

Breakfast Food No. 5 is promptly digested and contains the ingredients necessary for a well-nourished brain.

6. *Brain-power* is what wins to-day. Brute force can not compete with well nourished "gray matter."

Breakfast Food No. 6 is the ideal brain and nerve food. It is quickly digested, and the phosphate of potash combines with albumen in the system to form new brain and nerve cells.

7. Did you ever examine *Breakfast Food* No. 7 through a magnifying glass? Upon every granule will be seen small, shining crystals of sugar.

Our patented process alone brings about this formation of sugar from the starchy cereal, thus providing the elements nature uses for rebuilding the brain and nerve centers.

8. Thanksgiving Breakfast would be as cheerless without *Breakfast Food No. 8* as the dinner would be without the *Turkey*.

9. Cereals are the food of the ages. But never before were these cereals put into such inviting form.

It is done by Professor White's process—by putting the whole kernels into sealed steel tubes. Then the tubes are revolved for sixty minutes in a heat of 540 degrees.

The heat turns the moisture in the grains to steam and creates an enormous pressure. Then the tubes are opened and the steam explodes. Instantly every starch granule is blasted into a myriad of particles.

Imagine such a food. Do you wonder at the wide demand for *Breakfast Food No. 9*?

10. You can improve your *health* in 30 days by increasing the amount of *Breakfast Food No. 10* you eat.

Millions have found that frequent and regular eating of this food resulted in clearer skins, rosier cheeks, firmer muscles, and clearer and more active minds.

Table IV. gives the average judgment and the average deviation (A.D.) of the ten subjects with respect to the three sets of advertisements.

Table V. states the order of preference of the actual advertisements used in Experiment I. and the "made-up" advertisements based on them, which were used in Experiment III. The correlations between the average judgments of the ten subjects in Experiment I. and Experiment III. indicate that the "made-up" advertisements are essentially different from the actual advertisements. Consequently no valid comparison of the two sets can be made.

A discussion of the data concerning the Vacuum Cleaner advertisements and the Piano advertisements will be found in Chapter IV.; concerning Breakfast Food advertisements in Chapter V.; and concerning Toilet Soap advertisements in Chapter VI.

SECTION 4. *Picture vs. "Copy" Advertisements*

Before passing on to a detailed consideration of the results from these experiments let us note a peculiarity in the data of Experiment II., which is not shown in the results of Table III. An analysis of the data from the twenty Barnard students showed that the group could be divided into two parts, each of whose members judged in the main with the subgroup she was in. Table VI. shows this division on the basis of their reaction to advertisement No. 1 and the figures opposite each subject show the *deviation* from the individual's ranking of each advertisement and the average ranking of the twenty. The algebraic signs (+ and —) indicate whether the individual judgment ranks the advertisement higher or lower than

that of the average. A study of this table reveals the striking fact that as regards advertisements Nos. 1, 2, 7, 8, and 10 these two sub-groups react as units and where the first group² ranks the particular

TABLE IV

DATA FROM EXPERIMENT III. GIVING GRADES AND AVERAGE DEVIATIONS FOR THE THREE SETS OF TEN "MADE-UP" ADVERTISEMENTS

Vacuum Cleaner Ads.			Piano Ads.			Breakfast Food Ads.		
Ad. No.	Av.	A.D.	Ad. No.	Av.	A.D.	Ad. No.	Av.	A.D.
5	4.0	1.6	6	3.6	1.9	2	2.7	2.0
4	4.2	2.2	2	3.8	1.4	6	4.2	1.6
7	4.2	2.4	4	4.7	2.0	3	5.1	2.3
2	4.3	2.3	10	4.7	2.5	1	5.2	3.2
1	5.2	1.8	9	5.0	2.8	9	5.4	2.5
3	5.2	2.4	3	5.7	2.8	10	5.9	1.9
10	6.1	3.3	5	5.8	1.6	7	5.9	1.9
9	6.3	2.0	8	6.5	2.0	5	6.1	2.1
8	7.0	1.6	1	7.5	2.3	4	7.0	2.4
6	8.5	1.4	7	7.7	1.5	8	7.5	2.1

TABLE V

ORDER OF PREFERENCE OF ADVERTISEMENTS USED IN EXPERIMENTS I. AND III.

Position	Vacuum Cleaner Ads.		Piano Ads.		Breakfast Food Ads.	
	Exp. I No.	Exp. III No.	Exp. I No.	Exp. III No.	Exp. I No.	Exp. III No.
1	2	5	8	6	1	2
2	4	4	7	2	2	6
3	6	7	2	4	8	3
4	7	2	5	10	3	1
5	3	1	6	9	5	9
6	9	3	3	3	6	10
7	8	10	4	5	9	7
8	10	9	1	8	4	5
9	5	8	9	1	7	4
10	1	6	10	7	10	8

Correlation + .05 — .26 + .33

advertisement considerably above the average judgment of the 20, the other group ranks it considerably below, or vice versa. Not only is this true if the averages of the groups are considered but also if we consider the individuals separately in the groups. The differences are great enough to warrant one in supposing that the two groups are each composed of subjects who constantly judge in an opposite manner. As regards the group judgments of the other five advertisements we find no appreciable difference in their ratings. A study of advertisements Nos. 1, 2, 7, 8, and 10 shows that No. 2

² The division into two groups has apparently no correlation with imagery nor scholarship, if the final mark in Psychology 7-8 can be interpreted as a judge of the latter.

TABLE VI

SHOWING THE DEVIATION BETWEEN EACH OF THE SUBJECTS' JUDGMENTS AND THE AVERAGE JUDGMENTS OF THE 20 SUBJECTS FOR EACH OF THE TEN BREAKFAST FOOD ADVERTISEMENTS

Sub- jects	Advertisements									
	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10
A	-5.3	+2.9	-2.9	-2.1	+4.2	+.2	+.5	-2.6	+2.5	+2.7
B	-5.3	+2.9	+1.2	+2.0	-.9	-1.9	+.5	+1.4	-2.5	+3.7
C	-4.3	+1.9	+1.2	-.1	+.2	-2.9	+1.5	-3.6	+2.5	+2.7
D	-4.3	+2.9	+1.2	-4.1	+3.2	+.2	+.5	-1.6	+4.5	-2.4
E	-4.3	+1.9	-.9	+3.0	-2.9	-1.9	+.5	+5.4	-1.5	+.7
F	-3.3	+2.9	+1.2	+2.0	+.2	+.2	+4.5	-3.6	-2.5	-1.4
G	-3.3	+2.9	+.2	+4.0	-2.9	+.2	+.5	-2.6	-.5	+1.7
H	-3.3	+2.9	-1.9	-3.1	+4.2	+3.2	+1.5	-.6	-3.5	+.7
Av.	-4.2	+2.6	-.1	+.2	+.7	-.4	+1.3	-1.0	-.1	+1.0
I	-.3	+2.9	+2.2	+3.0	-1.9	-2.9	-.5	+2.4	-.5	-5.4
J	+3.7	-1.2	-2.9	-2.1	-2.9	-.9	-2.5	+4.4	+3.5	+.7
K	+3.7	-6.2	+1.2	-.1	-.9	+3.2	-.5	-.6	+1.5	-4.4
L	+3.7	+1.9	-1.9	+1.0	-2.9	-3.9	-.5	+3.4	-1.5	+.7
M	+3.7	+.9	-.9	+4.0	+1.2	-1.9	-1.5	+2.4	-2.5	-5.4
N	+3.7	-3.2	+1.2	-4.1	+2.2	+1.2	+.5	+4.4	-2.5	-3.4
O	+3.7	-6.2	+.2	+1.0	+.2	-.9	-1.5	+2.4	+3.5	+2.7
P	+2.7	-6.2	+1.2	-1.1	+1.2	+1.2	-2.5	+1.4	-1.5	+3.7
Q	+2.7	-4.2	+3.2	+2.0	+.2	+.2	+.5	-3.6	-2.5	+1.7
R	+2.7	-4.2	+3.2	-2.1	+2.2	+1.2	-2.5	-3.6	+3.5	-1.4
S	+1.7	+1.9	+.2	-3.1	-2.9	+4.2	-1.5	-.6	+1.5	-1.4
T	+1.7	-5.2	-5.9	+2.0	-.9	-1.9	-.5	+4	+2.5	+3.7
Av.	+3.1	-2.9	-.1	-.2	-.3	+1.0	-1.1	+.9	+.5	-.3

and No. 10 have no picture in the advertisement, No. 1 is all picture, No. 8 is three fourths picture, and No. 7, although only one half picture, appears to me as predominantly a picture-advertisement, for it is the picture that holds the attention and not the reading matter. We see now that, with the exception of No. 7, the first group in Table VI. ranks the advertisements *with* pictures high and the advertisements *without* pictures low, while the second group ranks them in just the reverse manner. Just why this exception arises in the case of advertisement No. 7 is difficult to say. It may be that it should not be classed as a predominantly picture-advertisement. Or that it was reacted to by these two groups on other grounds. Or, as I believe, the exception may be explained on the ground that preference is always positive in nature; either we like a thing or we dislike it. As this advertisement was ranked low by the whole twenty, it indicates a positive dislike which would result in the first group consciously ranking it lower than the second group because the picture did not appeal to them. The reading-matter of the advertise-



ment on the other hand did not so strongly not-appeal to the second group and was therefore not consciously judged poor but found a place between the two extremes.

Table VII. states in another way the validity of the division of the twenty subjects into two groups. The table gives the average of the correlations of six of the subjects of each of the two subgroups with each of the other nineteen subjects. (These subgroups of six happened to be the first six in each group as originally arranged.) The averages show but one exception to the fact that each subject of the twelve so considered correlates higher with the various members of her group than with the members of the other group. I might add that exceptions in the individual correlations are rare.

As will be noted frequently in the following chapters, this is a very common phenomenon and, I understand, advertising men are familiar, at least to some extent, with this fact. As a practical suggestion it would seem then that the "ideal" advertisement should consist of half picture and half "copy," so as to catch the attention and hold the interest of both groups of readers.

TABLE VII

SHOWING THE AVERAGE OF THE CORRELATIONS BETWEEN EACH OF SIX MEMBERS
OF THE TWO SUBGROUPS WITH ALL THE OTHER MEMBERS OF THESE GROUPS

Subjects	Average Correlation		Subjects	Average Correlation	
	With Her Own Group	With the Other Group		With Her Own Group	With the Other Group
C	+ .54	— .13	J	+ .30	— .19
D	+ .31	— .17	K	+ .24	— .40
E	+ .25	— .09	O	+ .23	— .22
F	+ .49	— .09	P	+ .31	— .28
G	+ .46	+ .02	Q	+ .26	— .04
H	+ .38	— .20	T	+ .11	+ .20
Av.	+ .40	— .12	Av.	+ .24	— .16

CHAPTER IV

VACUUM CLEANER AND PIANO ADVERTISEMENTS

SECTION 1. *Consideration of the Data Concerning Vacuum Cleaner Advertisements*

THE results (see Table III. and also Plate I. for illustrations of the advertisements) do not show any very decided preferences. The group of ten subjects ranks advertisements No. 1 and No. 7 with positions of 3.3 and 3.6; Nos. 4, 3, 10, 5, and 8 with positions from 5.3 to 5.8; while Nos. 6, 9, and 2 are rated considerably lower, *i. e.*, 6.6, 6.9, and 6.9 respectively. The group of twenty Barnard students rate Nos. 2, 1, 10, 7, 9, 4, 3, and 8 between 4.5 and 5.6 and place Nos. 5 and 6 considerably lower, *i. e.*, 6.7 and 7.1 respectively.

Advertisements Nos. 1, 7, and 8 consist of a good large "relevant cut" with "reason-why" reading matter. The first two are ranked first and second by the men and second and fourth by the women. We may say, therefore, that they are preferred to the others by the thirty judges. Advertisement No. 8, on the other hand, is ranked seventh by the men and eighth by the women. Its superlative language ("the most wonderful Cleaning Device the World has Ever Known," etc.) probably accounts for its position.

Advertisement No. 2, which is actually the second page of a two-page advertisement in which No. 1 is the other page, was ranked on an average last by the men and first by the women. But when we consider the judgments of the women in detail we find that 12 of them gave it a rank between first and fourth, while the other 8 gave it a position between sixth and tenth. This is another example of the curious phenomenon discussed in Chapter III., namely that approximately half of these 20 women judge a picture advertisement high and a non-picture advertisement low, while the other half judge them in just the reverse manner. Advertisement No. 2 stands, consequently, first in the judgment of 12 women of the group of 20 and of 3 of the group of 10 men and last in the judgment of the other 15 of the two groups. Advertisements Nos. 4, 3, 10, 5, and 9 have smaller and less clear-cut pictures. They are grouped approximately together and about the mid-point (5.5). The data present no clear preference between them.

Advertisement No. 6 depicts the factory and a statement of the "tremendous success" that has accompanied their business. The

advertisement is ranked eighth by the men and last by the women. It is clear that its appeal is the least effective of all the ten.

A casual inspection of the ten advertisements shows that they are very complex in their make-up and suggest a great number of motives, and a study of the introspections shows that the different individuals were *consciously* influenced some by one, some by another of these motives. Consider, for example, these introspections of subjects who ranked No. 2 as first: "Cheap, price only one dollar, therefore, if not good, not much would be lost." "Guaranteed—responsible firm, claims to do a lot of work." "Appealed to me on account of the detailed description of the uses of the cleaner and the guarantee given." "I think the pictures influenced me considerably here because I could see probably how the thing worked." "Gives good plausible reasons why you need a cleaner, and why one of this particular kind." "Makes it worth while to buy one—gives good guarantee." On the other hand, the introspections are well-nigh unanimous in their condemnation of No. 6. "Poor picture; factory argument tiresome." "Unattractive picture and much uninteresting reading-matter." "Never like advertisements to make apologies for not being able to meet demand—does not ring true." "Too monotonous and uninteresting," etc.

Turning now to the data from Experiment III. (given in Table IV.) we note that advertisement No. 6 is again most decisively ranked last. Evidently an appeal based on the size of the factory or the number of sales does not interest or arouse the imagination of these subjects as compared with the other appeals. The predominating motives in the advertisements, which were given first, second, and third places, were "light weight," "easily adjusted," "easily operated," "more effective than a broom," and "saves carpet." Then come the motives of price: "guarantee," "installment plan," and "as cheap as present methods." And finally, in the advertisements ranked sixth to ninth appear motives of "dust and dirt," "cleanliness," "health," and "the saving of effort or work." We have here a progression from the specific reasons why a *certain* cleaner should be purchased to the general reasons why *any* cleaner should be purchased. Whether such a progression was in the minds of the judges is hard to say. Such a ranking of motives is, however, of great value if we have in mind the selling of a particular vacuum cleaner. The advertisement that sells its competitors' goods as well as its own is hardly a "howling success."

SECTION 2. *Consideration of the Data Concerning Piano Advertisements*

Very little reliance can be put upon the conclusions drawn from the data on Piano advertisements. (See Table III. for the data and Plate II. for illustrations of the advertisements.) The average judgments show that the preferences are slight, while the average deviations are in a number of cases very large, showing that there was no unanimity of judgment among the subjects. Advertisement No. 8 was the only advertisement that did not receive one judgment for first position and all of the ten received at least one judgment for last place. The correlation between the judgments of the two groups of subjects is but $+.114^2$. That such should be the case seems to the writer one of the strong proofs of the validity of the whole method of procedure. The advertisements are complex and very much alike with the exception of No. 9 and No. 3. This the results indicate. The article advertised is one which is not bought at the instance of any one advertisement. Moreover, in all probability, none of the subjects used in the experiment had ever bought a piano nor was in a position to do so at that time. Under such conditions one should not expect decisive results and we do not get them.

However, there are a number of interesting points which are worth while to note. The two Everett Piano advertisements, No. 9 and No. 3, were ranked last by both groups. Introspections from subjects who ranked them high are as follows: "I liked those advertisements best with artistic pictures and those containing the opinions of great artists who use the pianos." "I ranked it second because it was endorsed by artists whose opinion one would be very likely to respect." "The words 'Everett Tone is the Heart of Harmony' with the simple pictures of Chaminade, Carreno, and Nordica—'the World's Greatest Woman Composer, Pianist, and Singer, respectively' made me give this advertisement first place. It was straightforward, plain, and convincing with none of the 'This is the best, the one, and the only genuine,' etc." But, on the other hand, a larger number of subjects are not attracted by such an argument. For example, "Simply the fact that Chaminade, Carreno, and Nordica used the Everett Piano is no reason why I should want to possess one." "Publishing the picture of a few artists does not satisfy me as to the value of the piano." "Nothing in an advertisement makes it appeal less to me than the mention of those people who use the article." "Stupid, sentimental (Everett tone, heart of harmony), inartistic, pretentious, basing its appeal on the judgment

² By the formula $1 - (6\sum d^2/n(n^2 - 1))$ as given in Myer's "Text Book of Experimental Psychology," p. 131.

of those, who have probably been paid to give it favorably. It gives the impression of fraud." "No. 3 a stupid advertisement, neither the reading nor the picture appealed to me. Picture didn't mean anything."

The response to three of these advertisements shows a sex difference. Advertisement No. 6, the only advertisement composed of all reading matter (except a very small cut), was ranked first by the women and eighth by the men. (Nine women ranked it very high and two women ranked it very low.) Whether it was the name of the piano—Steinway—or whether it was some other factor which caused it to appeal to the women is difficult to state. Advertisement No. 4, the Knabe Baby Grand advertisement, and No. 8, the Kranich and Bach advertisement, were ranked first and second, respectively, by the men and eighth and seventh, respectively, by the women.

Advertisement No. 1 is ranked second by the women and third by the men. It is a Chickering advertisement displaying a grand piano in a beautiful parlor with a portentous staircase ascending to the left. Scott³ concludes that this type is the ideal Piano advertisement associating, as it does, the Chickering Piano with an "atmosphere of cultured refinement and elegance." A Steinway Miniature Grand advertisement, without a picture is preferred to it by the women, while a Kranich and Bach "Start the Children Right" advertisement and a Knabe half-page cut advertisement are preferred to it by the men. On the whole, however, it would average first in position for the entire thirty subjects.

From Experiment III. (see Table IV.) we see that advertisement No. 7 was ranked last in that experiment while in Experiments I. and II., where the actual advertisements were shown, it was ranked much higher. As it appears in Experiment III., it consisted simply of a direct quotation of the first paragraph and the last half of the second paragraph of the actual advertisement. The advertisement is evidently robbed of its strength by the elimination of the picture. The aim of the advertisement is to appeal to the pleasure obtained from possessing such an instrument and thus stimulate desire for it. Such appeals, the writer believes, are the strongest for the creation of prospective buyers. Other appeals are necessary, however, to insure the sale of the specific brand.

³ W. D. Scott, "The Psychology of Advertising," pp. 194-195.

CHAPTER V

CONSIDERATION OF BREAKFAST FOOD APPEALS

THE following experiment on Breakfast Food advertisements was so planned as to avoid the difficulties encountered in the experiments of Chapters III. and IV. The scheme of "made-up" advertisements in those chapters was amplified so that they should more nearly resemble actual advertisements. In doing so it was necessary to broaden the appeals in order to make them more comparable with business conditions, but in doing this it becomes more difficult to accurately ascertain the value of any one appeal specifically. In this regard there are two extremes to be avoided—first, the statement of pure appeals and nothing else, and second, the use of actual advertisements with their many appeals. In the former case we no longer have advertisements to deal with and so frustrate our aim, while in the second case, we are forced to rely on our own or collective opinion as to just which one of the many appeals in the advertisement is the dominating one and also what is the force of the other appeals. Such a situation is as difficult to determine as the original question.

A set of twenty advertisements was prepared based to a very large extent on actual Breakfast Food advertisements. In many cases phrases or whole sentences were quoted, while in other cases the writer arranged the sentences endeavoring throughout to follow the phrasing characteristic of such advertisements. Each "made-up" advertisement was typewritten on a separate sheet of paper. The twenty sheets were given to the subject together with a sheet of "directions." These typewritten instructions were used to insure as uniform an approach to the sorting of the advertisements as was possible. Following are the "Directions" that were used:

DIRECTIONS

Read through the twenty advertisements and then sort them into five piles according to their "persuasiveness." Pile No. 1 will represent the most persuasive, No. 2 the next, etc., with pile No. 5 as the least persuasive.

When the above is completed sort each pile as to their persuasiveness with respect to themselves. When you are through with the five piles you will have the twenty arranged in a descending series of merit as to persuasiveness..

The most *persuasive* advertisement will show the article you would choose out of the twenty if you had to base your choice solely upon the information supplied you in the twenty advertisements.

The subjects consisted of 29 women and 21 men. Of these there were among the women 22 undergraduate and 3 graduate students and 4 who were not in college, and among the men 11 undergraduate and 8 graduate students and 2 who were not in college. All the undergraduates were juniors or seniors at Barnard or Columbia college. The study of the relative merits of these twenty appeals is consequently based on the likes and dislikes of college men and women. The relation of the judgments of such a class of persons as compared with other groups of individuals is discussed at length in Chapter VI.

Following are the twenty advertisements used in the experiment.

BREAKFAST FOOD No. 1

When you want to eat a mighty *appetizing* breakfast food remember Breakfast Food No. 1.

Children can hardly wait for breakfast; it's the same with adults—it's so good.

BREAKFAST FOOD No. 2

In an article published in the *Saturday Evening Post* of March 10, 1909, Dr. F. E. Smith, the great medical authority on foods, said,—

“There is one kind of cereal that seems to me of marked value as a food. It is from this cereal, exclusively, that Breakfast Food No. 2 is made.

“I most heartily recommend its use for all.”

BREAKFAST FOOD No. 3

Do you like *Bananas*?

Try serving some Breakfast Food No. 3 in a dish of sliced bananas.

Then judge if they do not increase your enjoyment of the bananas and furnish you with a delightful breakfast dish.

BREAKFAST FOOD No. 4

Sometimes the *men* know best.

Most men like Breakfast Food No. 4 while traveling.

Why not try some at home and let the rest of the family judge?

BREAKFAST FOOD No. 5

Lack of success in life is due to Mental Dulness.

Mental Dulness usually comes from imperfectly nourished brains.

Breakfast Food No. 5 is promptly digested and contains the ingredients necessary for a well-nourished brain.

BREAKFAST FOOD No. 6

Breakfast Food No. 6 is the ideal *brain* and *nerve* food. It is quickly digested, and the phosphate of potash combines with albumen in the system to form new brain and nerve cells.

BREAKFAST FOOD No. 7

Did you ever examine Breakfast Food No. 7 through a magnifying glass. Upon every granule will be seen small shining crystals of sugar.

Our patented process alone brings about the formation of sugar from the starchy cereal, thus providing the elements Nature uses for our nourishment.

BREAKFAST FOOD No. 8

Thanksgiving Breakfast would be as cheerless without Breakfast Food No. 8 as the dinner would be without the *Turkey*.

BREAKFAST FOOD No. 9

Never before were cereals put into such form.

It is done by Professor White's process—by putting the whole kernels into sealed steel tubes. Then the tubes are revolved for sixty minutes in a heat of 540 degrees.

The heat turns the moisture in the grains to steam and creates an enormous pressure. Then the tubes are opened and the steam explodes. Instantly every starch granule is blasted into a myriad particles.

Such is Breakfast Food No. 9.

BREAKFAST FOOD No. 10

You can improve your *health* in 30 days by increasing the amount of Breakfast Food No. 10 you eat.

Those that have done this have found that frequent and regular eating of this food resulted in clearer skins, rosier cheeks, firmer muscles, and clearer and more active minds.

BREAKFAST FOOD No. 11

Brain-power is what *wins* to-day. Brute force can not compete with well-nourished gray matter.

Do you want to be a *success* in life? Do you want to reach the top of your profession? Then note—

Breakfast Food No. 11 has been especially designed to meet the enormous demands our civilization makes upon our mental activities. Its regular use for breakfast will go far toward that *success in life*.

BREAKFAST FOOD No. 12

Breakfast Food No. 12 is sold from 60 degrees North Latitude—Norway—to 45 degrees South Latitude—New Zealand.

In every village and city in all that great region you will find fellow-beings eating it for breakfast.

1847. BREAKFAST FOOD No. 13. 1910

For many years we have been engaged in manufacturing and selling our breakfast food. Our growth in business has been slow and steady, based on the complete satisfaction of our customers.

We are now in a position to greatly increase our business and so resort to advertising. But our ideal still remains of rendering complete satisfaction to each customer and thereby keeping his trade for life.

A \$2.00 SOUVENIR SILVER SPOON *Free*

Send us 10 of our trade-marks cut from the paper package of Breakfast Food No. 14 and ten cents (for packing and carriage). We will send you a

beautiful silver souvenir spoon of the old Mission Dolores of California. You can get this pattern only from us.

The spoon is genuine Roger's extra plate. Bought in any store it would cost you \$2.00.

We make this offer in order to get you into the habit of using our Breakfast Food. Once you commence we know you will never stop.

BREAKFAST FOOD No. 15

Royal Patrons

King Edward VII.
Emperor Wilhelm.
King of Spain.
Tsar of Russia.
Queen of Norway.
King of Portugal.

Royalty is in a position to know and secure the best article of its kind in every department of manufacture.

Can any intending purchaser afford to

overlook this most remarkable indorsement and convincing testimonial to the superior merits of Breakfast Food No. 15?

BREAKFAST FOOD No. 16

Prepared in *clean* kitchens, by *clean* people, with *clean* equipment. Guaranteed under the Pure Food Law of June 30, 1906.

Thousands of visitors annually witness its preparation in our *model* kitchens.

BREAKFAST FOOD No. 17

Patronize Home Industries.

Breakfast Food No. 17 is manufactured by us in this your home city. We employ hundreds of employees who live here and help make this, your city, prosperous.

Prefer our breakfast food to similar brands made elsewhere and help us in our business and in so doing help every one else living here.

BREAKFAST FOOD No. 18

"I used Breakfast Food No. 18 throughout my African hunting expedition; no better ever made."

Extract from *Theodore Roosevelt's* own account of his African Expedition. (October *Scribner's*, page 403.)

BREAKFAST FOOD No. 19

While other Combinations have *increased prices* to the consumer, our remarkable purchasing power, modern labor-saving equipment, and skilled workmen have combined to *lower prices* on Breakfast Food No. 19.

No need for you to pay 12½ to 25 cents a package for breakfast foods, when we can give you equally good for 10 cents.

BREAKFAST FOOD No. 20

The World's Finest Manufactory and the Largest Building in the world devoted exclusively to the making of Breakfast Foods is our Manufacturing Home.

This great building faces the Lake Shore Drive in Chicago, America's

finest boulevard, is six stories in height, and extends the length of a block from Ohio to Ontario Streets.

This is where Breakfast Food No. 20 is made.

Table VIII. gives the results from the 50 subjects. The advertisements are arranged in the order of preference figured from the median judgments. The medians are given with their quartiles (Q)¹ and probable errors (P.E.). The P. E. is figured from the average deviation (A.D.) using the formula, $P.E. = .845 A.D.$ The average judgment is also given and its P.E. figured from the A.D.

It is apparent that there is considerable variability in this group of subjects with respect to the relative superiority of the different advertisements. This is, of course, only to be expected as all the appeals used in this series are in use for foodstuffs and practically all for breakfast foods and consequently all should have considerable "pulling-power." This fact would seem sufficient proof for the assertion that all the twenty lie some distance above the zero point of persuasiveness. If this point could be determined in some manner we would then be able to state in actual quantities the merits of the several advertisements. But such a result will only be attained after many experiments coupled with extensive records obtained in actual business. That there are advertisements which would fall below the zero point seems certain to the writer. A tooth-paste advertisement painted on bill-boards about Peekskill during 1910 displayed a certain negro minstrel in most outlandish costume. Overhead was the statement that he always used — — — — — Tooth-Paste. Tooth-paste in a tube is now associated in the writer's mind with the repulsive figure and he will probably never use any such brand because of the accompanying emotion of disgust.

With the exception of a few minor changes in the order Table VIII. is corroborated in Tables III. and IV. In one or two cases, *e. g.*, advertisements No. 11 and No. 5 of Table VIII. and the corresponding advertisements—No. 6 and No. 5—of the latter tables, we find a more decided difference in the order of merit in the preliminary experiments than here. In this particular case the pictures of Experiment I. gave a far better representation of the "Success" and "Mental Dulness" appeals than did the "write-up" of this experi-

¹ "In so far as the measurements are distributed symmetrically about the median, the P.E. calculated directly will be the same as the distance from the central tendency reached by counting off in either direction 25 per cent. of the cases." This latter measure is the quartile. As the distribution of judgments for many of these advertisements is not symmetrical the quartile is given as well as the P.E. The quartile averages .44 of a position greater than the P.E. with these data. (See Thorndike, "Mental and Social Measurements," pp. 78-79.)

TABLE VIII

GRADES AND DEVIATIONS IN TERMS OF PROBABLE ERROR AND QUARTILE OF
20 BREAKFAST FOOD ADVERTISING APPEALS

Ad. No.	Median	Q.	P.E.	Average	P.E.
16	4.5	3.2	3.0	5.6	3.1
2	6.5	5.2	4.0	7.5	4.1
11	7.9	5.1	4.0	9.5	4.1
3	8.0	4.5	3.7	9.2	3.7
1	8.2	4.4	4.0	8.7	4.0
6	8.2	4.7	4.3	9.1	4.8
10	8.5	4.0	3.5	9.3	3.5
5	9.3	3.8	3.8	10.3	3.8
7	9.5	3.6	3.2	9.9	3.1
13	9.8	4.3	3.7	9.8	3.6
18	9.8	6.3	4.8	10.3	4.8
19	9.8	3.4	3.4	10.4	3.5
9	11.0	4.3	3.9	10.3	3.9
12	11.5	3.5	3.2	11.0	2.9
8	12.5	4.2	4.1	12.2	4.1
4	13.0	5.0	4.1	11.4	4.2
17	13.1	3.5	3.6	12.4	3.6
15	14.0	4.8	4.5	12.9	4.5
20	14.9	2.8	3.0	14.6	3.1
14	16.8	3.2	3.4	15.9	3.1

ment. The wide divergence in Experiment III. is probably due to the fact that the ten subjects while sorting the advertisements in that experiment recalled to some extent the pictures used in Experiment I. which they had sorted some time before.

From the data of Table VIII. it is apparent that advertisement No. 16 is rated first. Advertisement No. 2 has about 9 chances in 1,000 of being rated as high as No. 16; the remaining advertisements have less than 1 chance of so being rated. Advertisements Nos. 11, 3, 1, and 6 are rated practically equal, having less than 50 chances in 1,000 of being rated as high as No. 2. Advertisement No. 10 is rated nearly as high as these four. The five advertisements Nos. 5, 7, 13, 18, and 19 stand half-way between No. 10 and No. 9 with, on the whole, less than 80 chances in 1,000 of being rated as high as the former or as low as the latter. The remaining advertisements have the following approximate chances in 1,000 of being rated as high as the position of the advertisement just preceding it in the scale: No. 12, 229 chances; No. 8, 126 chances; No. 4 and No. 17, 156 chances; No. 20, 78 chances; and No. 14, 4 chances. The appeals rank then in the following order: "Cleanliness" is clearly first; "Doctor's recommendation," clearly second; "An Aid to Success in Life," "Taste," and "Health" tie for third place; "Sold by re-

liable firm," "Recommendation of Roosevelt," and "Cheap" tie for fourth place; then follow "Process of Manufacture," "Sold Everywhere," "Patronize Home Industry," "Royalty," "Magnificent Factory," and finally "Souvenir Spoon," which is clearly last of all.

Let us now consider the advertisements in detail.

Advertisement No. 16, based on Heinze's general appeal of cleanliness, was rated first of the twenty appeals. There is no difference here between men and women; 65 per cent. of each rated it fifth or better and only 7 per cent. rated it below twelfth position. It is certainly an exceedingly strong appeal and, as will be shown later, stands first for soap advertisements. An excellent example of this appeal appeared in the September number of the *Outlook*: "Soda Crackers Safe from Contamination. Uneeda Biscuit, in their dust-tight, moisture-proof package, are protected against all those harmful elements to which bulk soda crackers are open—dust, germs, dampness, odors, handling, and even insects. Maybe you've seldom thought about the matter. Maybe you've never realized as you've tried to eat a tasteless, tough, ordinary cracker, what uncleanliness and deterioration it has gone through."

Watson² would identify this appeal under the more general one of hygiene. The results of this experiment all go to show that the mere appeal of "cleanliness" is much stronger than that of "health." It is not denied that they are related but rather it is claimed that the former is connected from earliest childhood with innumerable habits of thought and action whereas the later is less definitely associated with daily life and hence weaker in its effects.

The last paragraph of this advertisement was meant to merely emphasize the central theme of cleanliness but it undoubtedly aided materially in also convincing the reader of the sincerity of the copy. This is a very important factor—to the writer's mind, the most important factor in all advertisements. Such a policy, as that of Heinze, where 35,000 persons visit his plant yearly, must "produce a thorough confidence in the cleanliness and general worth of his products upon the part of the buying public."

The relation between the appeal of cleanliness and that of taste is brought out very well by Scott.³ "The manner in which the environment fuses with an article and determines its value is well illustrated by food in a restaurant. The food may be of the very best quality and the preparation may have been faultless, yet if the service is poor—if the waiter's linen is dirty and his manner slovenly,—

² C. L. Watson, "The Hygienic Idea in Advertising Copy," *Printer's Ink*, July 14, 1910.

³ W. D. Scott, "Theory of Advertising," p. 101.

the food does not taste good and is not appetizing. You may reason out that the waiter has nothing to do with the preparation of the food and that his linen has not come into contact with it, but all your reasoning will do you but little good. The idea of dirty linen and this particular food are in your mind indissolubly united, and now, instead of thinking of food in the abstract, you are compelled to think of food in this particular relationship, and the result is anything but appetizing."

Advertisements Nos. 3, 1, and 8⁴ (ranked fourth, fifth, and fifteenth) may be considered together for they are the only advertisements of the twenty that appeal directly to the taste of the food. A careful survey not only of the Breakfast Food advertisements but also of all food advertisements will show that this "taste" appeal is little used. "Grape-Nuts is of the opinion that we eat in order to enlarge the lobes of the brain and thereby make more money. Heinze thinks we choose our foods chiefly to avoid benzoate. The breakfast food folks and the coffee substituters spend most of their money on considerations of health or the high cost of living. Kellogg dwells on the sincere flattery of his imitators. Armour spends a good deal of space on his spoons. Walter Baker, until very recently, has advertised his laurels rather than his excellent goods,"⁵ etc.

Our data, as shown in Table IX., suggests that there are three general types of persons, those who respond to "taste" appeals, those who are indifferent to such appeals, and those who consider them with suspicion. The table shows 22 of the 50 subjects as belonging to the first group and 9 belonging to the third. The remainder of the 50 appear under the second group. The first and last group, as shown in this table, are quite constant in their attitude towards all three of the advertisements. Introspections also apparently support such a division. The first group "prefers taste and well-known authority," "eats bananas with breakfast food," considers No. 3 "an honest advertisement" and says that it "appeals most." In the third group we find these advertisements referred to as "bombast" or having "no appeal" and "slight association," etc. There is a much closer relationship between the judg-

⁴ The original of advertisement No. 8 (see No. 8 in Experiment I. shown in Plate III) was of course only run in November numbers of the monthly magazines and hence might not be expected to be a particularly strong appeal except at Thanksgiving time. It was used because of the difficulty of finding other direct appeals to the taste.

⁵ S. H. Page, "Writing Appetite into Copy," *Printer's Ink*, July 14, 1910. A most interesting article and one which considers many of the points brought out in this section.

TABLE IX

JUDGMENTS OF "TASTE" APPEALS, *i. e.*, ADVERTISEMENTS
No. 1, No. 3, AND No. 8

Subjects	Group ranking No. 1 high			Subjects	Group ranking No. 1 low		
	No. 1	No. 3	No. 8		No. 1	No. 3	No. 8
MA	1	6	7	MK	19	8	20
FA	1	8	19	ML	19	4	20
MB	1	4	16	FM	19	2	18
FB	1	20 ⁶	3	MM	18	19	10
FC	1	16	3	FN	18	16	20
FD	2	1	3	FO	18	16	20
FE	2	1	18	FP	17	18	2
FF	2	7	16	MN	17	16	6
MC	2	4	5	FQ	16	10	9
FG	3	5	1	Av.	17.9	12.1	13.9
MD	3	11	10				
FH	4	5	15				
ME	4	14	12				
MF	5	17	9				
MG	5	10	14				
MH	5	19 ⁶	7				
FI	5	10	20				
MI	5	1	14				
FJ	6	7	5				
FK	6	4	5				
MJ	6	4	12				
FL	6	4	1				
Av.	3.5	8.1	5.2				

ments of No. 1 and of either No. 3 or No. 8 than there is between those of No. 3 and No. 8. With Spearman's Method of Correlation calculated from the per cent. of unlike signs ($r = \cos \pi U$) we obtain the following correlations:

Between advertisements No. 1 and No. 3 + .588

Between advertisements No. 1 and No. 8 + .368

Between advertisements No. 3 and No. 8 + .063

The division, then, into the three groups is apparently not as clear as would seem from Table IX.

The value of the "taste" or "non-taste" appeals depends ultimately on the considerations which lead us to eat. Page⁷ asks this question but dismisses it with the assumption "That our extra-

⁶ In these two cases the subjects dislike bananas and consequently were not only not attracted but were positively repelled by the advertisement. It was therefore just as much a response to taste in their cases as if they had ranked No. 3 first or second.

⁷ S. H. Page, *ibid.*

gant, self-indulgent nation eats at least partly for pleasure." To the extent that we eat for pleasure the "taste" appeal must surely be the strongest. Who upon turning the pages of a monthly magazine has not wanted some griddle-cakes and Karo Syrup, or Whitman's chocolates, or some Nabiscos, or even a Shredded Wheat Biscuit, when shown with berries, sugar, and cream? The California Fruit Canner's Association have a number of ideal advertisements in the subway and street cars of this city. One of them, showing the rectangular can opened at one end and beside it a dainty dish of asparagus already to be eaten, has the following copy: "Raised under perfect conditions." "Cut and packed at its perfection. Unmistakably the finest quality you can buy." The whole is gotten up very tastefully and, I dare say, every one looking at it feels like eating some. Compare such appeals with this one: "Brain and Nerves require special Food for their nourishment because they are the most highly 'specialized' organs of the body. The Food required by Nature for rebuilding Brain and Nerve Cells is found in Grape-Nuts."⁸

James⁹ contends that "not one man in a billion, when taking his dinner, ever thinks of utility. He eats because the food *tastes* good and makes him want more. . . . The connection between the savory sensation and the act it awakens is for him absolute. . . . It is not for the sake of their utility that they [instincts] are followed, but because at the moment of following them we feel that that is the only appropriate and natural thing to do." It seems inconceivable that any one would not grant the above—that men and women should be stimulated to *feel* like eating food "shot from a gun," or prescribed as "healthy" by a physician, or "guaranteed to form new brain cells," unless sick at the time. But such the data and introspections would seem to indicate. There are several among these fifty subjects who consciously consider the constituents of the various foods and endeavor to have "well-balanced menus."

Advertisements No. 2, No. 15, and No. 18 form another group of appeals which arouse interest in the prospective purchaser on the basis of the opinion of authorities. The breakfast food in these cases was recommended by a physician, or was used by royalty, or by Roosevelt on his African hunting expedition. They were ranked second, eighteenth, and eleventh, respectively. With Spearman's method of correlation calculated from the per cent. of unlike signs we obtain a correlation of —.279 between the judgments of No. 2 and No. 15 and —.125 between No. 2 and No. 18, while between No. 15 and No. 18 there is a correlation of + .809. Tables X. and XI.

⁸ Cf. *Hampton's Magazine*, November, 1910.

⁹ W. James, "Psychology," II., 386.

present these relationships in a different manner. It is especially noticeable in the last group in Table XI. where only two individuals, who rank No. 18 between sixteenth and twentieth positions, rank No. 15 above sixteenth place, one at thirteenth and the other at fourth. Evidently then, persons judge differently a doctor's recommendation from one of royalty or of a man, as Roosevelt, but do rank recommendations from the two latter in a similar manner. The statement of a responsible physician is of considerable value as far as Breakfast Foods are concerned in the eyes of half of our subjects. A smaller number are influenced by the statement that Roosevelt

TABLE X

COMPARISON OF JUDGMENTS OF ADVERTISEMENT NO. 2 WITH NO. 15 AND NO. 18

	Ad. No. 2. Av. A.D.	Ad. No. 15. Av. A.D.	Ad. No. 18. Av. A.D.
Group of 22 ranking No. 2 between first and fifth	2.3 1.0	12.3 5.6	9.6 5.4
Group of 20 ranking No. 2 between sixth and fifteenth	9.6 2.4	12.3 5.3	11.2 6.2
Group of 8 ranking No. 2 between sixteenth and twentieth	16.8 0.9	16.4 3.1	10.6 5.9

TABLE XI

COMPARISON OF JUDGMENTS OF ADVERTISEMENT NO. 18 WITH NO. 15

	Ad. No. 15. Av. A.D.	Ad. No. 18. Av. A.D.
Group of 15 ranking No. 18 between first and fifth	8.9 5.3	2.4 0.9
Group of 18 ranking No. 18 between sixth and fifteenth	12.0 4.2	10.1 2.4
Group of 17 ranking No. 18 between sixteenth and twentieth	17.4 2.5	18.0 0.9

TABLE XII

SEX-DIFFERENCES IN THE AVERAGE OR MEDIAN JUDGMENTS OF ADS. NO. 2, NO. 15, AND NO. 18

Ad.	Av.	A.D.	Men.		Women.		
			Med.	A.D.	Av.	A.D.	Med.
2	6.2	4.0	5.0	4.0	8.5	5.4	7.0
15	10.3	6.1	11.0	6.1	14.8	4.8	17.7
18	7.8	5.6	5.6	5.6	11.7	5.1	14.0

TABLE XIII

SEX-DIFFERENCES IN THE JUDGMENTS OF ADVERTISEMENTS NO. 2, NO. 15, AND NO. 18

Ad.	Sex.	Per Cent. of Judgments according to Position.		
		1-5 Per cent.	6-15 Per cent.	16-20 Per cent.
2	Male	52	43	5
	Female	38	38	24
15	Male	38	33	29
	Female	7	31	62
18	Male	47	31	22
	Female	19	42	39

uses the food and a still smaller number by the Royalty appeal. On the other hand 8 consider No. 2 of little value as a reason to buy Breakfast Food, 17 so consider No. 18, and 24, No. 15.

This difference of response is due to a very considerable degree to the factor of reliability in the testimonial. "There can be little doubt that the heyday of the trustworthy testimonial has passed. There have been those who have taken advantage of the testimonial. But it is a fact that there are still hundreds of people of brains who are willing to write testimonials which are sincere."¹⁰ The Sanatogen Campaign started a short time ago is an illustration of very extensive use of this appeal. They recognize the popular feeling that testimonials are generally bought and consequently take great care to use only those from men and women who would never be thought of as selling their name.

These three "authority" advertisements appeal more to men than to women. Table XII. gives both the average rank and the median rank for the men and the women for these three advertisements. (The distribution of judgments in No. 15 and No. 18 is markedly bi-modal and hence it is extremely difficult to present any one term as an indication of the tendency of the men as distinguished from the women.) An analysis of the data, as given in Table XIII., shows a greater per cent. of men than women ranking each of the three advertisements high and a correspondingly lower per cent. of men than women who rank them low. The men were somewhat older than the women and this tendency to accept some one else's word for the superiority of an article when in doubt themselves may be due to that fact or it may be a characteristic of men as compared with women.

Advertisements Nos. 5, 6, 7, 9, 10, and 11 are general appeals to "health." They are all ranked between 7.9 and 11.0. Advertisements Nos. 11, 6, and 10 are judged superior to the other three. They make a *direct* appeal to health by giving the constituents of the food, or by describing the results of eating it in terms of "clearer skins, rosier cheeks," etc., or in terms of the "success" that accompanies "well-nourished gray matter." The other three make an *indirect* appeal by discussing the process of making the food or by stating that "mental dulness usually comes from imperfectly nourished brains," thus implying the need of "our" Breakfast Food.

This difference in "pulling-power" between *direct* and *indirect* statements of the same appeal is shown in the preliminary experiments with Breakfast Foods advertisements (see Experiments I., II.,

¹⁰ "The Sanatogen Campaign and the Use of Testimonials," *Printer's Ink*, June 23, 1910.

and III.). The numbers of the six advertisements used here, except No. 11, correspond to the numbers in those experiments. Both No. 6 and No. 11 were based on No. 6 of the preliminary experiments as the latter combined two distinct appeals. If then we compare the average position of Nos. 6, 10, and 11 in the four experiments with the average position of Nos. 7, 5, and 9 we have the following:

	Exp. I.	Exp. II.	Exp. III.	Exp. V.
Av. Position of No. 6, 10, 11	5.5	5.0	4.8	9.3
Av. Position of No. 7, 5, 9	6.0	7.2	5.8	10.2

As in each of the four experiments the remaining appeals were different it is unfair to compare the amount of the averages of one experiment with that of the others. What the data prove here is that *direct* appeals are ranked higher than *indirect* ones.

Advertisement No. 5 is not only *indirect* according to the above classification, it is also *negative* in its appeal, *i. e.*, it states what happens when you don't use its breakfast food. A comparison of its position with that of No. 11 in this experiment or No. 6 of the three preliminary experiments, where the *positive* side of this appeal is used, gives the following:

	Exp. I.	Exp. II.	Exp. III.	Exp. V.
Position of Ad. No. 11 or No. 6	5.5	5.2	4.2	9.5
Position of Ad. No. 5	7.2	7.2	6.1	10.3

This superiority of the "affirmative" appeal to the "negative" appeal is well-nigh universally accepted as a doctrine, yet it is violated constantly by advertisers. Nye¹¹ reviews the question very ably in a recent issue of *Printer's Ink*. Among other things he says: "It takes a judicial mind to weigh the evidence pro and con and hand down a decision favorable to the article or goods advertised. Unfortunately, the average consumer, even the average space buyer, has not such a mind." Hence it would "behoove us to stick to the arguments strictly for it, and to present them in such a way that the reader can not possibly carry away with him an unfavorable impression fused with the other."

However, it seems to the writer, it is not so much a question of "affirmative" and "negative" appeals as appeals which *do* or *do not* fit the reader's general frame of mind. The point is that we are all capable of exercising our judgment when necessary, but ordinarily we act without thought of the reasons for our action. If afterwards a reason is required we are able to give one or more. It is a question, however, whether the action was due to these "given reasons" or to

¹¹ F. W. Nye, "The Affirmative Argument *vs.* the Negative in Advertising Copy," *Printer's Ink*, September 15, 1910.

a more complex fusion of feelings and ideas, which we are unable to analyze by introspection. The reasons that were given in the introspections as to the arrangements of the various appeals show this point strikingly. A study of them would convince anyone that they were practically worthless as far as explaining the individual's judgments. Yet the judgments, themselves, are valid enough. Our actions are much more the outcome of unanalyzable feelings and ideas than of definite ones. To secure *deliberation* both sides of the question should be given. To secure *action* only those affirmative statements should be presented as will fuse with the general state of mind of the buyer and will produce a pleasurable attitude toward the article. Cuticura Soap, for example, is introduced to the better classes of society by a pleasant picture with headings such as "Best for Baby's Skin," etc., while to the poorer classes of society, the advertisement is headed "Wonderful Cure of Sore Hands," etc. In both cases the situation described fuses with the general state of mind of the reader and the suggestion of Cuticura Soap is pleasantly aroused in his mind because it suggests an outlet to a desire—in the one case, a clean healthy baby and in the other case, healed hands.

Docknell¹² in pointing out how action was "forced from the greatest number of human beings" through the writings of Confucius, Buddha, Mahomet, and the Bible, laid down five principals, which are well-worth repeating in this connection. Taking the Bible as the standard of the four, we see that:

"1. It offered people something they wanted, or which, after its perusal, they realized they needed.

"2. It appealed primarily to the interest of its readers, that is to say, it talked more about its reader's wants and needs than of the remedy it offered.

"3. It always used simple language.

"4. It constantly repeated its message and said the same thing over and over again in the same and different ways. It did not consider that once is often enough to tell a message and expect it to be remembered.

"5. It is always dominant. It is always superior. It always affirms. It never appeals to its readers for confirmation of its standards. Every line breathes dominance, superiority, and confidence in its power to dictate to its readers as to what their action must be in order to acquire what it suggests."

A frequent appeal common to nearly every line of merchandise is represented by advertisement No. 12. "See, Everyone buys this

¹² T. E. Docknell, "The Law of Mental Domination," *Advertising and Selling*, September, 1910.

Breakfast Food. What's the matter? Why don't you?," is the inference from it. "Fifteen Million Human Hands wind Ingersoll Watches every night," or "Fifteen Million Dishes every Month of Puffed Rice," or "Ice worth over \$100,000 at the lowest wholesale prices used in one month to keep Borden's milk ice-cold" are examples of which hundreds of others might be found. It is scarcely ever used alone, however, as in this experiment. This appeal is rated very much higher than another common one, No. 20, which emphasizes the size or output of the factory and suggests, though more indirectly, the same line of thought. Both of them must be considered weak in their suggestion to prospective purchasers. We, of course, buy some things because every one else has them, many other things we buy, on the other hand, because no one else has them. On the whole, we buy because we want to and the successful advertisement must make us desire the article. "The advertisement used in recent magazines showing a case of Toasted Corn Flakes loaded on a pack mule along with an Indian in front of an adobe hut is a distinct but unsavory attempt to broaden the appeal for that well-known article of diet. It does not really add to our pleasure in a dish of corn flakes to know that they are also eaten by aborigines of the Great American Desert, nor should we expect it to increase the sales."¹⁸

Advertisement No. 13 was meant to convey the idea of an old reliable house which had built up its business by conservative methods. The author has never been satisfied with its wording and its position at eighth place can not be taken to indicate that a properly-worded appeal along this line would not be ranked much higher. (This point is considered in more detail on page 53.)

The Souvenir Silver Spoon appeal was ranked last by 17 of the 50 subjects and averaged last of all the twenty. Yet we find five subjects ranking it second, fifth, sixth, seventh, and eighth, respectively, and four others ranking it eleventh. One college girl, who ranked it last, said that she believed many college girls did buy for the souvenirs and her laboratory partner was one who rated it high. Evidently, however, judging from our data, college students have little faith in an article so advertised. Yet many articles for use by such a group are advertised in this manner, *e. g.*, Armour's Beef Extract, H-O Breakfast Food, etc. The wide use of this appeal coupled with the use of "trading stamps" indicate that the souvenir-appeal is a strong one for certain classes.

Advertisement No. 17 may be a strong appeal in some places or

¹⁸ W. W. Hudson, "Advertising Appeal," *Judicious Advertising*, October, 1910.

attached to other articles, but one would scarcely expect it to be so in New York City and applied to breakfast foods. It is very interesting to note that the women rate it considerably higher than the men (11.1 as compared with 14.6) and that of the nine who ranked it above eighth place seven were women.

We must realize that all these appeals produce results, a blank page with only the name of a breakfast food upon it will also produce results. The question in this discussion is not which are good and bad, but which produce the greatest returns for the least effort. Undoubtedly the advertisement that generates the maximum of pleasure, providing that pleasure is strictly relevant to the article itself, has the strongest appeal. A good example of irrelevantly aroused pleasure is the recent Cream of Wheat advertisement showing a group of men playing horse-shoe in the middle of the village street. In the background is the typical Cream of Wheat bill-board advertisement. The pleasure aroused in the advertisement is all centered in the characters gathered about the game, not in the breakfast food. It might very properly be asked, How many women ever played this game or are interested in the old bums of the town? Yet we find a whole-page colored advertisement in the *Delineator* of October, 1910! How many packages will such an advertisement sell? Such an advertisement must approximate pretty closely to the zero point of efficiency.

There are at least two primary considerations for breakfast foods—they must be fit to eat, clean, and not unhealthy and they must taste good. Knowing nothing of the food the first consideration is most important but once that is granted the question of taste ranks above every other consideration. Jane Addams¹⁴ sums up the whole point when she states that "perhaps the neighborhood estimate (of their New England kitchen) was summed up by the woman who frankly confessed that the food was certainly nutritious, but that she didn't like to eat what was nutritious, that she liked to eat 'what she'd ruther.'"¹⁵

¹⁴ J. Addams, "Autobiographical Notes," *American Magazine*, June, 1910.

¹⁵ Compare also W. D. Scott, "Theory of Advertising," pp. 101, 216-218; "Psychology of Advertising," Chapter on The Psychology of Food Advertising; and T. A. DeWeese, "The Principles of Practical Publicity," pp. 33-34 and Chapter XVII.

CHAPTER VI

CONSIDERATION OF SOAP ADVERTISING APPEALS

THIS chapter deals with two problems: first, what is the order of superiority of soap advertising appeals for college students, and second, what is the relation between such an order for college students and similar orders of preference for other groups of individuals. The first problem is identical with that discussed in the previous chapter, except here the commodity is soap instead of breakfast food. The second problem has not been discussed so far in this report. It had been hoped that it could be considered in some detail, taking into account a large number of different groups of individuals. But the extreme difficulty of securing a large number of individuals of any one group coupled with the fact that many uneducated persons were unable to follow the directions, has made it impossible to carry out the work as originally planned. However, a sufficient amount of data is given to indicate the general relationship between judgments obtained from college students and those obtained from other groups of society.

SECTION 1. *Order of Preference of Soap Advertising Appeals for College Students*

This experiment is similar in nature to the one of Chapter V. The same number of "made-up" advertisements are used; in many cases the appeals are identical in nature. The "directions" used in the Breakfast Food Experiment are made use of here too. Thirty-seven of the fifty subjects are the same. (The fifty subjects used here consisted of 27 women and 23 men.) It is consequently valid to compare the strength of the appeals in the one group with that of the other. Following are the twenty "made-up" advertisements which were used in this experiment.

1. BEAUTY

A good natural complexion and a fair, soft skin are necessary essentials of *beauty*.

Toilet Soap No. 1 is the most perfect beautifying agent known, possessing those special and unique qualities which render the skin pure, clear, and of exquisite softness.

More than all the cosmetics in the world, it is the special beautifier of the complexion.

2. In an article published in the *Ladies' Home Journal* of April, 1909, Dr. G. B. Spencer, the noted physician and skin specialist of London, said:

"Toilet Soap No. 2 seems to me of marked value as a soap. I most heartily recommend its use for all."

3. *That Baby of Yours*

will have a tender, burning, irritated skin unless you exercise care in choosing the soap to be used for his daily bath.

Toilet Soap No. 3 is Baby's Friend.

Its use can be recommended to all who would be careful of the baby's welfare.

4. *With Toilet Soap No. 4 and Lukewarm Water*

A few months ago, one of our managers visited the Carnegie Institute in Pittsburg.

Accompanied by the custodian, he entered one of the assembly halls, the walls and ceiling of which were covered with mural paintings.

These paintings were as clean and bright as if the painter had just finished them.

Mr. X. looked at them for several minutes, admired them greatly, and then asked: "How do you keep those murals so clean?" The reply was, "With Toilet Soap No. 4 and lukewarm water."

"But," you say, "I have no mural paintings that need to be cleaned. What I want to know is, how to clean laces, shirt-waists, blankets, curtains, and the like."

We answer, as did the custodian of the institute, "With Toilet Soap No. 4 and lukewarm water."

5. *Try it at our Expense*

We feel that words can not adequately represent the superiority of Toilet Soap No. 5.

Consequently, we make you this offer.

Send us a two-cent stamp, to cover postage, and we will send you a half-size trial cake of our toilet soap.

Once you have used it, you will never be without it.

6. *Does not Irritate the Skin*

Soaps containing strong alkali, coloring matter, and adulterants, will dry and irritate the skin and destroy its softness.

Toilet Soap No. 6 has nothing to hide—no dyes to deceive, no high perfumes to delude the sense of smell.

Its use leaves the hand with none of those "drawn feelings," but soft, and moist, and clean, as after the use of a cold cream.

7. *The Soap for Particular People*

Toilet Soap No. 7 is designed to meet the precise desires of those who appreciate good form and taste.

It comes in several different tints of cream, and pink, and green, so as to match the color scheme of your room.

It is most delightfully scented, thus giving an added pleasure to its use.

Its presence in your home is only another way in which your character may be interpreted and your individuality reflected.

8. Dear But Worth It

Our Toilet Soap No. 8 costs almost twice as much as ordinary toilet soap. We spare no expense in its manufacture. The best is never cheap.

9. Guaranteed

All merchants handling our Toilet Soap will refund you its cost if after careful trial you are not pleased. Simply return the remainder of the box and get your money back.

Can we do more to interest you in Toilet Soap No. 9?

10. Much Depends on Your Health

Doctors tell us that our health depends in large degree upon the condition of our skin. The pores must be kept open for proper perspiration. In this way do we get rid of much of the poisonous waste products of the body.

Toilet Soap No. 10 is guaranteed to dissolve the fatty substances that clog our pores and thus insure to us healthy skins and healthy bodies.

11. Toilet Soap No. 11 is of special value for shampoos and the bath.

It lathers freely and quickly. No rubbing for two or three minutes to get a little lather which disappears as soon as more water is added.

With its use the morning shower can be made a true bath and in the same length of time.

12. Sold Everywhere

Wherever you go on this great globe you will find Toilet Soap No. 12 for sale.

If you ascend the Yang-tse-Kiang to Chang-Sha in China or visit Wellington in New Zealand or enter a drug store on Broadway in New York City you will find our soap awaiting your purchase.

13. 1836. 74 years of Service 1910.

For many years we have been engaged in manufacturing and selling our soap. Our growth in business has been slow and steady, based on the complete satisfaction of our customers. We have been satisfied with this in the past.

But we are now in a position to greatly increase our business and so resort to advertising. However, our ideal still remains of rendering complete satisfaction to each customer and thereby keep his trade for life.

14. Souvenir Tea Spoon Free

There is a coupon with each cake of our Toilet Soap No. 14. These coupons are valuable.

We will mail a silver souvenir teaspoon to every person who sends us before December 31, 1910, thirty of these coupons and ten cents (for packing and carriage).

These souvenir spoons are genuine Roger's extra AA plate and are the same as sell for \$2.00 in any store.

15. Royalty is in a position to know and secure the best article of its kind in every department of manufacture.

Such members of royalty as the Tsar of Russia, the Queen of Norway, the King of Portugal, the King of Spain, along with King Edward VII. of England, and Emperor Wilhelm of Germany are constant users of our soap.

Can any intending purchaser afford to overlook this most remarkable indorsement and convincing testimonial to the superior merits of Toilet Soap No. 15.

16. 99 *Per cent. Pure*

Toilet Soap No. 16 is just a white, *pure*, oval cake of soap, made from edible products.

It contains no "free" (uncombined) alkali.

It is *pure* and *clean*.

17. *Exhilaration in the Bath*

They who can take an ice-cold Bath successfully know the fine, cheering, after-glow which follows it.

But that splendid influence on the skin is impossible to many people whose heart-action will not permit it.

There is, however, a safe substitute for the coldness in the water. That substitute is X, the chief ingredient of Toilet Soap No. 17.

X possesses some wonderful characteristics.

Its first action is Anodyne—bringing "Therapeutic Rest" to the skin.

Its next action is control of Hyperæmia—or control of blood in the small vessels of the skin.

Its third action is Antiseptic, destroying all Bacteria in contact with the skin.

Its fourth action is that of a powerful Healer and Nutrient, replacing affected tissue with sound Flesh and Fiber, while feeding the skin through its pores.

Can you conceive a finer Toilet Soap?

18. "I used Toilet Soap No. 18 throughout my African Hunting expedition; no better ever made."

Extract from *Theodore Roosevelt's* own account of his African Expedition. (October *Scribner's*, page 403.)

19. While other Combinations have *increased prices* to the consumer, our remarkable purchasing power, modern labor-saving equipment, and skilled workmen have combined to *lower prices* on Toilet Soap No. 19.

There is no need for you to pay 5 to 10 cents a cake for soap, when we are able to give you two cakes for 5 cents.

20. The *World's Finest Manufactory* and the *Largest Building* in the world devoted exclusively to the making of Toilet Soap is our Manufacturing Home.

This great building faces the Lake Shore Drive in Chicago, America's finest boulevard, is six stories in height, and extends the length of a block from Ohio to Ontario Streets.

This is where Toilet Soap No. 20 is made.

The first section of Table XIV. gives the results from the 50 subjects. From these figures it is evident that the 20 advertisements can be divided into eight groups in which the probable errors of the medians in one group do not overlap with those of another, *i. e.*, that the chances are more than even that the positions of the advertisements in one group would not be interchanged with those of

TABLE XIV

GRADES AND QUARTILES (Q) OF SOAP ADVERTISING APPEALS FOR DIFFERENT GROUPS OF INDIVIDUALS

Ad. No.	50 Students.			25 Business Men.			25 Teachers.			20 Grad. Students.			21 Students.			10 Students.			101 Men Summary.	
	Ave.	Q.	Ave.	Q.	Ave.	Q.	Ave.	Q.	Ave.	Ave.	Q.	Ave.	Ave.	Q.	Ave.	Q.	Ave.	Q.	Ave.	Q.
16	3.8	2.5	4.8	2.2	4.0	2.6	4.0	2.4	3.0	2.8	2.5	1.9	3.9	2.5						
6	5.0	2.5	4.3	3.0	7.1	2.3	7.0	2.6	5.0	2.8	6.0	2.0	6.0	2.9						
10	6.3	3.6	6.0	3.3	8.0	4.5	7.5	5.0	5.8	2.7	6.0	3.1	6.5	4.1						
8	8.3	4.0	13.7	4.1	7.1	3.8	7.0	4.8	10.6	4.1	4.3	4.2	8.6	5.0						
11	8.5	3.6	5.0	3.5	10.3	3.7	7.0	4.0	6.1	4.1	5.2	3.2	6.4	3.9						
4	8.5	4.1	13.7	3.6	9.3	5.3	10.5	5.7	10.0	3.9	12.5	2.2	12.1	5.0						
2	9.0	4.3	12.0	4.1	7.3	4.1	7.5	3.8	10.3	3.6	9.8	2.9	9.5	4.0						
9	9.0	4.5	9.7	4.1	9.3	5.4	9.0	5.4	9.0	5.0	13.0	3.8	9.6	5.4						
3	9.5	4.9	8.8	2.7	11.0	3.6	12.5	4.0	9.0	3.3	9.5	3.5	9.6	3.7						
17	10.5	5.3	6.3	5.6	9.9	4.1	10.0	5.7	9.0	4.3	7.5	5.4	8.6	5.0						
5	10.7	4.1	6.2	3.9	10.3	3.7	10.5	6.5	11.7	4.8	12.5	4.8	10.1	5.5						
1	10.8	3.6	9.0	3.6	11.3	3.6	13.0	2.3	9.3	3.6	11.0	3.0	10.7	3.7						
13	10.8	3.5	8.3	4.0	10.0	4.6	11.5	3.5	9.0	3.8	7.0	3.8	9.4	4.3						
19	12.7	3.3	15.6	2.3	15.8	3.5	11.5	2.4	14.8	3.3	15.8	1.7	14.8	3.2						
12	13.0	3.6	13.7	2.0	11.3	3.7	13.5	3.0	15.0	3.0	12.5	4.0	13.1	3.2						
18	13.5	5.8	13.7	4.0	8.0	4.9	9.5	6.0	12.8	5.8	13.0	2.9	12.1	5.4						
15	13.5	5.5	13.0	3.6	10.8	6.0	8.5	5.0	10.3	4.4	9.5	3.2	11.1	4.7						
7	15.8	4.3	11.0	4.8	13.0	2.9	11.5	4.5	13.8	4.9	16.5	4.4	12.3	4.6						
20	16.1	2.6	16.7	2.7	17.3	2.3	16.2	2.5	15.8	3.1	16.8	1.8	16.5	2.5						
14	18.3	2.2	17.8	3.1	19.3	1.8	17.8	3.0	18.3	1.6	19.9	0.3	18.8	1.8						

another group, if a greater number of subjects were employed. Advertisement No. 16 is thus clearly first; No. 6 second; No. 10 third; Nos. 8, 11, 4, 2, 9, and 3 fourth; Nos. 17, 5, 1, and 13 fifth; Nos. 19, 12, 18, and 15 sixth; Nos. 7 and 20 seventh; and No. 14 eighth. (The P.E. of No. 3 does slightly overlap with No. 17 and to that extent the fourth and fifth groups are not distinct.) The value of appeals for soap are then as follows: "Cleanliness" first; "Does not irritate the Skin" second; "Health" third; "Expensive," "Shampoo and Bath," "General use," "Doctor's recommendation," "Guaranteed," and "Baby" fourth; "Bath," "Try it at our expense," "Beauty," and "Reliable Firm" fifth; "Cheap," "Sold Everywhere," "Roosevelt recommendation," and "Royalty" sixth; "For particular people" and "Large factory," seventh, and "Souvenir Spoon" last.

A comparison of these soap appeals with the twenty breakfast food appeals of Chapter V. reveals the fact that ten of them are identical in thought and approximately so in phrasing. These ten are Nos. 2, 10, 12, 13, 14, 15, 16, 18, 19, and 20. Seven are given the same relative position among the twenty in both sets, while three, Nos. 2, 10, and 18, are ranked differently. Advertisement No. 2, the "doctor's recommendation," is rated second for breakfast food and

TABLE XIV. (Continued)

52 Students.		43 Women.		95 Women Summary.		59 Farmers.		14 Business Men.		6 Doctors.		22 Misc. Men.		97 Men Summary.		Ad No.
Ave.	Q.	Ave.	Q.	Ave.	Q.	Ave.	Q.	Ave.	Q.	Ave.	Q.	Ave.	Q.	Ave.	Q.	
2.2	1.5	3.4	5.0	2.7	2.4	11.6	3.9	13.0	3.3	17.5	4.0	10.0	4.6	11.7	4.5	16
3.8	2.3	4.4	2.0	4.1	2.0	9.3	4.6	15.0	5.9	9.5	8.0	11.2	6.1	10.4	5.7	6
5.1	2.0	5.4	3.1	5.3	2.7	10.7	5.5	13.5	3.5	12.5	4.0	8.0	5.5	10.7	5.1	10
7.2	4.7	4.8	4.2	6.4	4.4	10.9	4.0	11.0	4.5	7.5	2.1	11.7	3.2	11.3	4.6	8
9.3	2.9	6.9	3.2	8.3	3.3	11.7	4.4	10.8	3.7	11.0	5.5	14.8	5.5	11.4	4.8	11
11.0	4.2	12.3	5.4	11.6	4.3	11.0	5.3	7.5	2.5	5.0	2.9	13.5	4.7	10.2	5.3	4
9.5	3.5	9.9	2.9	9.7	3.0	10.6	3.2	13.5	4.4	13.5	1.6	8.0	4.7	10.7	3.8	2
9.2	4.5	9.6	3.8	9.4	3.9	12.7	4.4	9.0	5.8	13.5	2.5	9.2	4.8	11.6	5.1	9
9.3	3.5	11.0	3.5	9.8	3.8	10.2	5.5	9.0	4.2	6.0	3.2	10.5	4.0	9.7	5.1	3
8.2	4.1	8.8	5.4	8.4	4.5	13.4	4.9	6.0	5.3	14.8	0.7	9.2	4.1	11.4	5.1	17
9.8	4.9	10.3	4.8	10.1	4.7	10.8	5.2	15.0	7.3	5.5	2.5	11.8	3.3	11.6	5.7	5
8.6	4.2	6.9	4.5	8.1	4.7	10.6	4.2	11.5	7.9	15.0	1.9	10.0	5.9	10.8	4.9	1
9.8	4.2	10.4	3.8	10.1	4.0	10.9	5.3	11.0	5.6	5.0	2.0	9.5	3.4	9.4	4.9	13
14.7	3.7	16.0	4.4	15.1	4.0	7.0	5.8	11.0	5.0	5.0	0.9	8.0	4.9	7.1	5.4	19
12.3	2.7	13.3	4.0	12.6	3.1	9.9	5.4	8.2	2.9	7.5	5.5	8.5	3.9	8.7	4.9	12
14.3	3.4	12.9	3.4	13.7	3.4	12.8	5.4	11.0	5.0	14.5	3.2	13.5	4.1	13.1	5.2	18
14.3	2.2	15.1	3.2	14.5	2.6	9.3	4.8	12.0	4.3	12.5	3.8	13.5	5.3	10.6	5.6	15
17.5	3.1	12.8	4.4	15.4	3.7	9.1	4.2	8.5	2.9	18.5	3.9	12.0	3.9	9.6	4.6	7
16.8	2.4	15.0	3.0	16.6	2.6	11.7	4.7	9.5	5.1	7.0	2.5	10.0	5.7	9.7	5.2	20
19.3	1.3	19.0	2.7	19.1	1.8	7.9	4.8	12.1	3.2	5.0	1.0	8.5	3.8	8.2	4.7	14

seventh for soap; No. 10, a "health" appeal, is rated seventh for breakfast food and third for soap, and No. 18, the "Roosevelt" appeal, is rated eleventh for breakfast food and sixteenth for soap. It seems natural that No. 2 and No. 18 should be stronger breakfast food appeals than soap appeals, but, on the other hand, it does not seem fitting that a "health" appeal should be weaker. The discrepancy may, perhaps, be explained as due to the different phrasing of these two health appeals, although the main theme is the same.

Let us now consider the advertisements in detail.

Advertisement No. 16 is based on the "purity" appeal so commonly used by both Ivory and Fairy Soap. Whether it is rated first in the minds of these subjects because of the prevalence of its use and hence the unconscious recognition of it as *the* standard appeal for soap advertisements or whether it is naturally the strongest appeal for such a commodity and has been discovered to be so by soap advertisers is an interesting question in the history of advertising. Suffice it to say, it is now the strongest appeal for this class of subjects.

Advertisement No. 6 emphasizes the effect of the use of the soap on the skin. "It does not irritate the skin" but "leaves the hands soft and clean and moist." In other words, it claims to give us

those pleasurable feelings we desire when using soap. Such an appeal is comparable to that of "taste" for breakfast food advertisements. Advertisement No. 11 presents the same general appeal but limits it to the bath and shampoo. Either it is not written so well or the special appeal of the bath is not so strong as the general one of toilet. Advertisement No. 17 also appeals to the pleasure of the use of soap—but here restricted to that of the cold-bath. Its exaggerated style and ridiculous claims cause it to be ranked much lower. The distribution of the judgments for this appeal is bi-modal—one group of 21 rank it between first and eighth with the mode at one and the other group of 29 rank it between eighth and twentieth with the mode at fourteen. Although its final position is low, yet, because of the large number that rank it very high, we must conclude that it is a very successful appeal. It will not appeal to every one, but it does appeal strongly to some.

This advertisement illustrates very beautifully the strength of "affirmative" appeals. I doubt whether any one of the fifty subjects, if asked in an examination, would agree to the statement that any soap could "replace affected tissue with sound flesh and fiber, while feeding the skin through its pores." The majority while reading over the advertisements did not notice this point at all, but afterwards, when their attention was called to it, they felt as though they had been "stung" and wished to put the advertisement lower in the scale. Anything that would have caused deliberation would have ruined this appeal.

Advertisement No. 10 not only appeals to "health" but states that the soap does just what we want it to do—it cleanses the skin. Like Nos. 16, 6, and 11 it describes what the soap is like and mentions specific qualities. Such appeals are undoubtedly the strongest.

Advertisement No. 8 is an unusual appeal for soap but one which has considerable promise as a very effective advertisement. There is a large class of persons who enjoy buying the best of any particular article. The feeling of satisfaction in knowing that one has something that the majority haven't makes the extra cost insignificant. It is evident from Chapter VI. and the data here that if the "cost" is the main appeal to be presented, an expensive soap will appeal more than a cheap one for this class of buyers.

Advertisements Nos. 2, 15, and 18 may again be considered together. With breakfast food advertisements we found no correlation between the judgments of No. 2 with either No. 15 or No. 18 but a high correlation between No. 15 and No. 18. With that commodity No. 2 was ranked second and No. 15 and No. 18 eighteenth and eleventh, respectively. Here they are ranked seventh, sixteenth, and

seventeenth. And here also we find a correlation of +.13 between No. 2 and No. 15, +.25 between No. 2 and No. 18, and +.64 between No. 15 and No. 18. The peculiarities, then, of these three appeals as shown in the preceding chapter are present here but not so prominently. There is, however, very close agreement among the twelve that ranked No. 2 fifteenth or lower in also ranking No. 15 or No. 18 low. The average positions for these three advertisements by this subgroup are: No. 2, 16.6; No. 15, 13.8, and No. 18, 15.3.

As pointed out in Chapter V., the writer has felt that No. 13 does not properly convey the idea of an old established firm. In order to determine whether a better worded appeal might have greater weight, 21 subjects, all of the fifty of last year who could be found, were asked to again sort the twenty advertisements, but this time using the following appeal instead of the old No. 13.

1836 Seventy Four Years of Soap-Making 1910

For seventy-four years we have been supplying you with *good* soaps. True, the soaps we sold your grandparents—and even your great-grandparents—were *not* as good soaps as we are selling *you* TODAY.

In those days we had neither our present superb facilities nor our wonderful experience. We have been growing—improving all the time. Our ideal has been to make a soap that will give you complete satisfaction in every way.

For seventy-four years we have held this ideal—and *have lived up to it*. To-DAY—13MS Toilet Soap stands as a monument to our sincerity of purpose and to our ability to attain our aims.

The 13MS Toilet Soap Co.

This appeal was written for this purpose by Mr. S. D. Hofheimer, of Frank Seaman, Inc., Advertising Agents. The comparative results for the two “wordings” are as follows:

	Position	Upper Quartile	Lower Quartile
With old No. 13 appeal.....	9.3	4.6	4.1
With new No. 13 appeal.....	9.0	4.3	3.5

Evidently then the new appeal has a trifle greater value. Those who judge both appeals as poor do not rank the new appeal quite so low as they do the old appeal. It is possible that still other wordings of this appeal might be ranked higher, but, on the whole, it would appear that its present position approximates its true value.

Summary.—The results here confirm those of previous chapters. The strongest appeals are those which are strictly relevant and describe the article itself or some one of its specific advantages. Then come more general appeals which do not describe the article or its use but endeavor to create a desire for it by associating it with strong instincts or habits of life.

SECTION 2. *The Relation of the Order of Preference of Soap Appeals for College Students with Similar Orders from Other Groups of Individuals.*

The data used below were all secured between the months of March, 1910, and February, 1911. The same twenty appeals were used as given above except for a few minor changes which are here listed. Instead of the "Directions" used above the following was substituted as being simpler and more easily understood.

DIRECTIONS

Read through the 20 advertisements.

Sort them in the order in which *you* would *buy* the toilet soap.

Place (1) the advertisement, which describes the soap you would buy on top; (2) your second choice (the one you would take, if you couldn't get the first) under the first, etc.; until you have the 20 arranged with the soap which you would least care to spend your money for at the bottom.

(It is suggested, that sorting first the advertisements into 3, 4, or 5 piles and then sorting each pile by itself may be an easy method.)

Each of the "made-up" advertisements was signed by the name of the Soap Co., *e. g.*, "The 1AG Toilet Soap Co.," etc. The first sentence of advertisement No. 1 was changed to read—"A good complexion and a fair, soft skin are necessary essentials of beauty." The second sentence of No. 7 was changed to read—"It comes in several different tints of cream and pink and green." The last sentence of No. 9 was omitted. The last sentence of No. 11 was changed to read—"Its use will make your morning shower a true bath and in less than the usual length of time." The last sentence of No. 15 was changed to read—"Do not overlook this most remarkable indorsement and convincing testimonial to the superior merits of Toilet Soap 15V0." The last sentence of No. 17 was changed to read—"There is no finer Toilet Soap." The last sentence of No. 20 was omitted. Following is a sample of these advertisements just as they were used:

Does Not Irritate the Skin

Soaps containing strong alkali, coloring matter, and adulterants, will dry and irritate the skin and destroy its softness.

Toilet Soap 6FL has nothing to hide—no dyes to deceive, no high perfume to delude the sense of smell.

Its use leaves the hand with none of those "drawn feelings," but soft, and clean, and moist, as after the use of a cold cream.

The 6FL Toilet Soap Co.

Table XIV. presents the results obtained from various groups of individuals. In each case the median position of the judgments is

given and its quartile. The P.E. of the median is, of course, the quartile divided by the square root of the number of cases.¹ The first section gives the median and quartile of the group of 50 students which has been discussed above. The second section presents the data from 25 young business men in the class of advertising at the 23d St. Y. M. C. A., which I was able to secure through the courtesy of Mr. Geo. E. Beck, the Educational Secretary of the Association, and Mr. F. L. Blanchard, the leader of the class. The third section presents the data from 25 graduate students in Teachers College, nearly all of whom are teaching in this city or vicinity. The fourth section presents similarly the data from 20 graduate students in Columbia University. In the next two sections we have data from 21 undergraduates from Columbia College and 10 from Dartmouth College. The latter were obtained through the aid of Professor W. V. Bingham. Section seven gives a summary of these five groups of men. Section eight gives the data from 52 Barnard students, 22 of whom performed the experiment last year and 30 this year. Then follows a group of 43 women comprising married and unmarried women and ranging in age from 20 to 60. Eighteen of these were secured through the assistance of my sister, Miss A. L. Strong, of San Francisco. The tenth section comprises both of these groups of women. Then come five sections giving four groups of subjects and a summary of the four. The data were secured for me through the great courtesy of Mr. Wm. McGee, of Garrison, N. Y. All of the subjects in these sections live in the vicinity of that place and consequently represent a distinct class of subjects so far as it is possible to differentiate people according to environment. The first of these five sections, or the eleventh in all, deals with the data from 59 farmers, the twelfth section deals with 14 business men, the thirteenth with 6 doctors, the fourteenth section with 22 others comprising—4 blacksmiths, 3 saloon-keepers, 3 store-keepers, 3 policemen, 2 bakers, 2 lawyers, 2 postmasters, 1 plumber, 1 undertaker, and 1 painter. The last section gives a summary of these last four groups. (The data for the 3 policemen and 1 painter were received after the summary was calculated and are consequently not included in it.) In Table XV. will be found the detailed distribution of the judgments of the 101 men, the 95 women, and the 97 men from the vicinity of Garrison.

¹ This relationship is only true when the distribution of judgments follows the normal curve of distribution. In those cases where we do not have this symmetrical distribution the P.E. of the median position can be only approximately indicated. By calculating it from the quartile rather than the A.D. we obtain a larger figure. Whatever error arises then will tend to underestimate the accuracy of the median position rather than to overestimate it.

TABLE XV

DISTRIBUTION OF JUDGMENTS OF 101 MEN.

Position	Number of Advertisements																			
	16	6	10	8	11	4	2	9	3	17	5	1	13	19	12	18	15	7	20	14
1	15	7	6	10	10	6	5	3	1	12	5	1	7	0	1	7	5	0	0	0
2	20	14	7	6	1	4	3	8	1	7	3	3	6	0	5	5	6	2	0	0
3	11	7	8	4	15	6	6	2	4	6	9	4	3	1	2	6	4	3	0	0
4	11	11	8	8	5	5	5	6	4	7	9	6	3	0	2	4	3	2	3	0
5	5	8	11	5	11	4	7	8	7	6	2	5	10	0	1	3	3	4	0	0
6	9	7	11	1	10	2	8	3	7	4	5	3	6	3	3	5	6	7	0	0
7	10	9	6	12	3	2	5	10	9	3	2	6	3	2	3	3	7	3	1	1
8	3	8	6	4	8	5	7	6	10	5	8	5	7	5	4	1	2	3	1	2
9	2	12	7	3	3	5	4	4	5	6	4	8	6	7	5	7	3	5	4	1
10	4	3	3	8	5	4	9	6	6	7	6	6	7	2	2	3	8	7	2	2
11	3	0	2	6	8	3	5	3	5	3	4	14	3	7	10	4	6	7	4	4
12	3	0	5	3	5	8	5	5	9	3	7	3	7	8	9	4	6	9	2	0
13	1	3	3	2	3	7	9	2	6	7	6	11	6	6	6	5	5	4	4	4
14	0	0	4	7	4	10	3	3	5	8	4	5	5	7	7	9	3	7	9	1
15	0	3	4	8	2	5	3	3	6	3	3	5	4	7	14	8	8	2	9	4
16	2	2	4	1	2	6	3	8	2	5	3	6	4	14	12	3	5	4	11	7
17	1	1	4	6	4	4	3	7	5	0	9	7	6	6	3	8	1	6	13	8
18	0	4	1	3	1	5	7	5	5	5	3	2	5	13	7	3	6	4	9	12
19	1	1	1	3	0	3	2	8	3	2	6	2	1	9	5	6	11	10	13	14
20	0	1	0	1	1	7	2	1	1	2	3	2	1	3	0	7	2	12	16	40

TABLE XV. (Continued)

DISTRIBUTION OF JUDGMENTS OF 95 WOMEN

Position	Number of Advertisements																			
	16	6	10	8	11	4	2	9	3	17	5	1	13	19	12	18	15	7	20	14
1	25	16	4	10	2	0	6	4	3	12	1	6	2	0	0	2	2	0	0	0
2	20	7	11	12	6	3	2	3	2	7	5	6	3	1	3	2	1	1	0	0
3	10	18	10	6	5	3	3	8	6	5	2	9	5	1	2	0	2	1	0	0
4	8	10	10	10	10	5	6	5	4	4	5	5	6	2	2	3	0	1	0	0
5	5	12	16	4	6	4	2	2	9	6	9	2	7	3	1	3	2	0	2	0
6	4	6	11	6	4	4	5	10	3	4	5	11	6	1	3	2	2	4	2	0
7	5	11	6	9	7	4	5	7	6	6	5	5	3	4	5	4	0	2	1	2
8	4	3	1	5	9	8	8	4	5	4	4	6	4	7	2	4	4	6	4	1
9	2	1	6	2	9	7	9	5	7	4	8	11	7	1	7	5	2	1	0	1
10	0	2	4	2	11	6	8	6	9	7	6	0	7	10	8	3	1	4	0	1
11	2	1	5	4	3	3	12	7	6	5	4	2	6	3	6	7	3	8	3	3
12	0	1	2	4	5	4	5	5	7	8	2	5	8	2	8	8	4	7	6	2
13	2	2	2	3	4	6	8	5	8	1	2	7	6	6	7	5	8	6	5	2
14	2	1	4	5	1	2	2	7	6	7	5	5	5	2	6	10	12	1	6	6
15	1	0	0	1	3	6	3	1	0	5	8	6	4	7	11	8	11	9	7	3
16	3	1	0	5	1	7	2	7	5	0	7	1	5	7	5	8	10	8	10	4
17	0	0	0	3	4	9	4	4	2	1	8	5	4	11	5	8	8	3	11	5
18	0	1	1	1	2	6	2	3	2	5	4	1	4	7	9	5	6	11	21	5
19	1	1	0	3	2	5	2	0	2	2	3	4	2	12	3	5	9	12	8	21
20	1	0	2	0	1	3	1	2	3	2	2	1	1	8	2	6	4	12	4	40

TABLE XV. (Continued)

DISTRIBUTION OF JUDGMENTS OF 97 MEN FROM VICINITY OF GARRISON, N. Y.

Position	Number of Advertisements																			
	16	6	10	8	11	4	2	9	3	17	5	1	13	19	12	18	15	7	20	14
1	2	6	7	4	2	7	4	7	6	8	5	4	8	6	5	1	2	5	6	2
2	5	4	6	2	4	4	3	6	4	5	7	5	3	6	9	4	7	3	5	5
3	2	6	2	3	3	9	3	8	6	3	5	3	5	5	4	4	5	7	7	7
4	3	2	5	5	7	2	5	1	4	3	6	7	6	9	6	4	4	8	2	8
5	5	6	2	6	4	5	1	2	4	4	4	5	5	12	4	5	6	7	1	9
6	8	2	8	4	6	4	5	1	5	0	6	6	4	8	4	4	3	1	9	9
7	5	6	3	6	5	4	3	6	7	3	2	7	4	4	3	8	5	7	3	3
8	1	6	3	6	3	5	10	3	6	4	4	7	2	3	11	2	2	5	6	8
9	6	4	6	3	5	4	7	7	6	6	2	3	9	0	7	3	5	7	5	3
10	5	7	2	7	3	5	5	5	8	4	4	4	2	6	5	8	6	6	3	2
11	5	4	6	7	6	5	7	5	5	5	2	7	5	2	4	4	5	8	2	3
12	6	5	3	6	4	6	8	4	2	1	7	5	6	5	4	4	6	6	3	6
13	10	3	6	6	10	4	6	7	4	5	3	5	4	2	2	4	6	4	3	3
14	6	4	2	5	3	4	5	9	5	1	6	6	6	3	4	10	1	3	7	7
15	5	3	6	9	5	4	3	4	3	7	7	6	5	4	4	4	5	4	5	3
16	8	1	6	3	10	6	8	7	1	6	5	4	1	6	5	4	3	5	3	5
17	3	7	4	3	6	4	5	6	5	10	6	6	4	4	6	5	6	2	2	3
18	1	4	7	3	3	7	3	5	6	2	7	4	7	3	1	12	3	4	10	4
19	8	9	5	8	3	4	3	4	4	7	6	3	6	2	1	5	7	4	7	0
20	3	7	5	4	4	3	3	3	7	8	3	5	2	7	6	7	7	3	4	6

If now we compare the results obtained from the group of 50 college students with (1) the 101 men and (2) the 95 women, we find a very high degree of resemblance. Using the Pearson "product-moment" method of calculating correlation we obtain coefficients, respectively, of +.90 and +.95 and with the "rank-differences" method coefficients of +.88 and +.91.² Now, if we desire to note the differences that occur in the several orders of superiority, we have two methods of doing this: first, by noting the *difference in the amount* of the median position of the respective advertisements and second, by noting the *difference in the order* of superiority of the advertisements. The first method, considered together with the variability of the respective positions, *i. e.*, the quartiles, gives a measure of the *uniformity* with which the first group ranked the advertisement as compared with the second group. Comparison of the data from the group of 50 students with the 101 men shows little difference between them as to uniformity of judgment. The average of the quartiles for the former is 3.89 as compared with 4.02 for the latter. The former group is thus slightly less variable in its judgments than the latter. The average of the quartiles of the 95 women is 3.45, which indicates that they as a group are less variable in their judgments

² If these coefficients could be corrected for attenuation they would show a still higher figure indicating a very close relationship.

than either of the other two groups. Not only is the variability greater for the men if we thus consider the average quartiles of the two groups but if we consider the quartiles of each advertisement in the one order with that of the corresponding advertisement in the other. For in this case the quartiles for every advertisement except No. 19 are greater for the men than for the women. This same point is also shown clearly when we compare the range of judgments. For the 50 students there is a range from 3.8 to 18.3; for the 101 men a range from 3.9 to 18.8; while for the 95 women it is from 2.7 to 19.1. That this group of 95 women should show less variability in their judgments than the 101 men is rather surprising as 43 of the 95 women range in age from 20 to 60, come from various walks in life, have had varying degrees of education, and are living—some in New York city, some in San Francisco, and some in Garrison, N. Y. The men are all college men, with the exception of most of the members of the subgroup of 25 business men and are all within twenty years of each other in age.

The second method, as outlined above, gives the *relative rank* of one advertisement with another on the basis of the entire twenty. By this method, then, and considering only differences of more than one position, we find that advertisements Nos. 4, 12, and 19 are ranked higher by the 50 students than by the 101 men and advertisements Nos. 7, 11, 13, 15, and 17 are ranked lower. The only differences of more than five positions are with advertisement No. 4, the Ivory Soap "Carnegie Institute" appeal and No. 13, the "reliable firm" appeal. Comparing the group of 50 students with the 95 women we find that advertisements Nos. 2, 4, and 19 are ranked higher by the former than by the latter and advertisements Nos. 1, 3, and 17 are ranked lower. Here again No. 4 is ranked higher by more than five positions by the 50 students than by the 95 women and No. 1 is so ranked lower. No. 1 is the "beauty" appeal and is ranked fifth by the women as against twelfth by the 50 students. We may conclude then that the group of 50 students represents very closely groups of educated men or young business men and groups of college women or women of the middle class and of varying ages. Advertisement No. 4, however, is ranked too high by the students while No. 13 is ranked too low to represent other groups of men and No. 1 is ranked too low to represent other groups of women.

Handling the data in the same manner we find that advertisements Nos. 2, 7, 11, 13, 15, and 17 are ranked higher by the 101 men than by the 95 women and advertisements Nos. 1, 3, and 12 are similarly ranked lower. Men then rank the following appeals slightly higher than women: "Doctor's recommendation," "For

Particular People," "Shampoo and Bath," "Reliable Firm," "Royalty," and "Exhilaration in the Bath," while they rank these lower: "Beauty," "Baby" and "Sold Everywhere." Of these nine appeals the "Reliable Firm" appeal is, however, ranked decidedly higher by the men than by the women and the "Beauty" appeal decidedly lower. But the interesting thing in the two orders of superiority is not these differences but that the two orders agree so closely. This is only another instance in which experimental work has failed to show any marked differences between men and women as to mental traits.

Now let us turn and compare our order determined from the 50 students with the order from the 97 men living about Garrison. Here the one striking point is the dissimilarity between the two. With the Pearson "product-moment" method of calculating correlation we obtain a coefficient of —.700 between the two groups and with the "rank-differences" method a coefficient of —.532. If we consider the range of positions for the advertisements we see that that of the 97 men is from 7.1 to 13.1 or only 6 places while that of the 50 students is from 3.8 to 18.3 or 14.5 places. This greater variability of the former group is likewise revealed in the amount of the quartiles—all but three are greater than with the group of 50 students and the average quartile is 5.01 as compared with 3.89 of the latter group. As a quartile of 5.00 would result from a chance sorting and the range of positions is but three tenths of the possible range it is evident that the data from the 97 subjects do not differ much from a chance distribution. That being the case very little can be postulated regarding the relative superiority of one appeal over the next. It may be that this is a characteristic of such a group of uneducated persons—that they are unable to differentiate complex appeals. That is to say, that on the whole any one of these appeals is as strong as any other one in selling soap. Further experiments should be carried out, however, before such a radical position can be affirmed.

Turning now to the order of superiority of appeals as determined by the 97 men we have the following: "Cheap," "Souvenir Spoon," "Sold Everywhere," "Reliable Firm," "For Particular People," "Baby," "Large Manufactory," Ivory "Carnegie Institute" Ad., "Does not irritate the skin," "Royalty," "Doctor's Recommendation," "Health," "Beauty," "Expensive," "Shampoo and Bath," "Bath," "Try it at our Expense," "Guaranteed," "Cleanliness," and "Roosevelt." We may conclude that an order of superiority as determined by college students will not represent at all such a group as the men living in and around Garrison, N. Y.

Having compared the three "Summary" groups of subjects with

the group of 50 students let us now note to what extent the various subgroups resemble the summary groups. Table XVI. is presented in order to give the detailed facts in as concise a manner as possible and so that comparisons can be made in those ways which are desired by the reader. The coefficient of correlation between each subgroup and the summary is given in order to indicate how closely the latter does really represent the former. The range of judgments and the average quartiles are shown in order to give an idea of the variability of the subgroup. And then the various advertisements are given which are ranked more than one position either higher or lower than in the order of the summary. By glancing over such a list one can determine which advertisements are judged differently by the various subgroups while the absence of an advertisement from these lists indicates that the subgroups are agreed as to its merit.

The majority of the variations listed in the above table are deviations of two or three positions from the order of the summary. Any deviations of five or more positions must be interpreted to be an indication of some real difference between the subgroup and the summary. The 25 business men rank No. 8, the "Expensive Appeal," ten places below the summary order and they rank No. 5, the "Try it at our expense" appeal, six places above the summary order. The 25 teachers rank No. 4, the Ivory "Carnegie Institute" appeal, and No. 18, the "Roosevelt" appeal, seven and nine positions, respectively, above the summary order, whereas they rank No. 11, the "Shampoo and Bath" appeal nine positions lower. The 20 graduate students rank No. 15 and No. 18, the "Royalty" and "Roosevelt" appeals six places higher than the summary order, while they rank No. 1, the "Beauty" appeal, No. 3, the "Baby" appeal, and No. 13, the "Reliable Firm" appeal, five, six, and seven positions, respectively, below that order. The 21 undergraduates rank No. 3, the "Baby" appeal, five positions higher and No. 8, the "Expensive" appeal, eight positions lower than the summary order and the 10 Dartmouth undergraduates rank No. 9 six places lower than this order. In general graduate students are more influenced by such appeals as "Royalty" and especially "Roosevelt" than are undergraduates and young business men and they are less influenced by such appeals as "Beauty," "Baby," and "Reliable Firm." The group of young business men rank the "Expensive" appeal low as compared with the other subgroups but are impressed by such an appeal as "Try it at our Expense."

There is no characteristic difference between the various subgroups of women. If we compare the results from the data of 22 Barnard students secured in April, 1910, and the data of 30 Barnard

Subgroups	Correlation with Summary	Range	Q.	Ads. ranked higher than Summary Order	Ads. ranked lower than Summary Order
25 Business Men	+.85	4.3 to 17.8	3.5	1, 3, 5, 7	2, 8, 18
25 Teachers	+.79	4.0	19.3	3.8	2, 4, 8, 18
20 Graduate Students	+.82	4.0	17.8	4.1	2, 4, 7, 8, 15, 18, 19
21 Undergraduates	+.89	3.0	18.3	3.8	1, 3, 4, 9
10 Undergraduates	+.93	2.5	19.9	3.1	2, 5, 8, 17
101 Men (Summary)		3.9	18.8	4.0	2, 5, 6, 7, 9
52 Barnard Students	+.98	2.2	19.3	3.3	3, 9, 17
43 Women	+.96	3.4	19.0	3.8	7, 20
95 Women (Summary)		2.7	19.1	3.5	3, 12, 15, 19
59 Farmers	+.72	7.0	13.4	4.8	1, 2, 5, 7, 8, 10, 15, 16
14 Business Men	+.14	6.0	15.0	4.6	4, 8, 9, 11, 16, 17, 18
10 Doctors	+.56	5.0	18.5	3.1	4, 5, 8, 9, 11, 18
22 Miscellaneous Group	+.31	8.0	14.8	4.6	1, 2, 5, 9, 10, 16, 17
97 Men (Summary)			7.1	13.1	5.0

students secured in November, 1910, we find a remarkably close relationship between the two orders of preference for the different appeals and also for the actual amounts assigned each advertisement. The Pearson "product-moment" method of correlation, which takes both of these factors into account, gives a coefficient of + .93. If this was corrected for attenuation we would have practically + 1.00. That a group of individuals should give results almost identical with that of a similar group of different individuals separated by an interval of half a year in time and pertaining to such supposedly complicated mental processes is truly surprising. Admitted that much remains to be done in establishing the relationship between results obtained by this method and actual business conditions, it is certain that the processes studied and measured here are as definite and constant as those met with in the other sciences.

The facts pertaining to the group of 97 men from Garrison as presented in Table XVI. show clearly that the summary order of preference does not closely represent the various subgroups. The correlation figures are low and the number of appeals which are ranked differently by the subgroups is large. However, these subgroups are better represented by their summary than by the order of preference of the 50 students. The corresponding coefficients of correlation between the subgroups and this order are respectively, — .26, — .24, — .12, and + .01.

Summary.—A group of 50 college students will represent very closely the judgment of groups of educated men and women, of young business men, such as attend evening schools, etc., and of women of the middle class regardless of age. They will not represent at all the judgment of groups from small towns and farming sections such as the regions around Garrison, N. Y., from which the data were obtained.

It is fair to extend the results as set forth in previous chapters regarding the judgment of college students to groups of educated men and women in general. But as the data of this report are mainly concerned with cheap articles of common use, very little can be postulated concerning the relation of various groups of individuals with regard to more expensive commodities.

CHAPTER VII

A STUDY OF 50 PACKER'S TAR SOAP ADVERTISEMENTS

SECTION 1. *The Effect of Repetition on "Pulling-Power"*

SHOULD the same advertisement be repeated again and again in an advertising campaign or should an entirely new advertisement be presented very frequently? Should the same cut be repeated and the copy varied or the reverse? Should the same general arrangement of copy and cut be maintained, as in the Fairy Soap Advertisements of to-day, or should an entirely new arrangement be presented with each new advertisement? Should the same advertisement be displayed in all the magazines of one month or should a different advertisement appear in each magazine?¹ Such are only a few of the many questions as to the desirability of *repetition* that constantly confront the advertising man of to-day.

Back of all such questions lies the general one—does an advertisement have an intrinsic value which is constant to the same observer at all times or does repetition affect its value? In other words, does an advertisement wax or wane in interest as do so many jokes?

Hollingworth² found that naive jokes and calamity jokes in which the predicament of the victim is self-induced wax in interest, while the sharp retort, the pun or play on words, wit, caricature, and the occupation-joke wane. Jokes combining the two elements remain static.

With such work in mind and using the same method an attempt was made to determine the effect of repetition upon fifty different Packer's Tar Soap Advertisements.³ These advertisements are shown in Plates V. to IX. In these five Plates two numbers are shown under each advertisement. The first is the number by which the advertisement is referred to in the tables and text. The second number is the position among the fifty as assigned by the experimental data and as shown in Table XX. For example, the first advertisement in Plate V. is marked "1-29"; the "1" is the number by which

¹ Two interesting articles on this point of recent date are J. DeWolff, "Repetition of Advertising Copy," *Printer's Ink*, October 20, 1910, and R. Barstow, "Repetition—Desirable and Otherwise," *Printer's Ink*, October 6, 1910.

² H. L. Hollingworth, "Experimental Studies in Judgment; Judgments of the Comic," *Psych. Rev.*, XVIII., 2.

³ These advertisements were obtained through the courtesy of Mr. Edward A. Olds, Jr., of the Packer Manufacturing Co.

the advertisement is designated, the "29" indicates that it is ranked twenty-ninth in the fifty. It should be noted that many of them have long been discarded from use. Ten subjects were used, five men and five women, all students with some experience in experimental psychology. None knew the object of the experiment nor were they told at any time that they would be asked to sort the advertisements again. The fifty advertisements were given them with the following type-written directions.

DIRECTIONS

Sort these 50 advertisements into 10 piles according to the order in which *you would buy* the soap.

Take for granted that each advertisement represents a different make of soap.

Endeavor to make equal the difference in merit between each pile and the one above it.

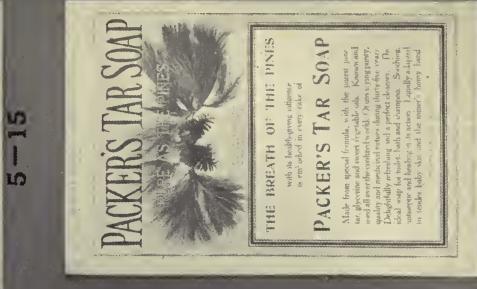
Pile No. 1 will contain those advertisements whose soap you feel very much attracted to buy, while on the other hand, pile No. 10 will contain those advertisements whose soap you feel that you would not buy.

In every case they were informed that they might actually sort the advertisements into less than ten piles if they chose but the gaps should be indicated. In this way, *e. g.*, they did not need to put any in pile No. 10, if they felt that there was no advertisement which made them feel that they would not buy the soap. Each of the ten subjects sorted the fifty advertisements once a week for five successive weeks. There were eleven irregularities: Two arrangements being made within five days of each other, three after eight days, three after ten days, and three after fourteen days. In every case, however, the same hour of the day was used.

Wells⁴ and Downey⁵ basing their statements on data secured under practically the same conditions as my own, state that a week is sufficient interval to overcome any serious defect in judgment from memory. My own introspections coincide with those of Downey, that "in general, there was a memory of the order of groups rather than of individual cards." Subject Dod said, "I have no memory of the position of the several advertisements, but I do remember the reasons which actuated me in the sorting of the advertisements." Personally, I felt very strongly on sorting the advertisements a sixth time that when I placed No. 45 first, I had radically departed from my previous arrangements and was dumbfounded when I discovered that it averaged second in the five sortings.

⁴ F. L. Wells, "On the Variability of Individual Judgments," "Essays Philosophical and Psychological," 1908.

⁵ J. E. Downey, "Preliminary Study of Family Resemblance in Handwriting," *Psych. Bulletin*, Univ. of Wyoming, No. 1, 1910.



Tables XVII. and XVIII.⁶ give the average position of each advertisement for each of the five successive arrangements for the five men and five women respectively. From these a study of waxing and waning for the two groups of subjects can be made. Table XIX.⁶ shows graphically whether a certain advertisement waxed or waned with any one of the ten subjects. A full arrow (\uparrow or \downarrow) indicates a final displacement of more than one full position as compared with the first arrangement; a check (\wedge or \vee) indicates similarly a displacement of only one position; and a dash (—) indicates that the advertisement was placed in the same position or pile all five times. From this table then a study of the waxing and waning for the individual subjects may be made. Conclusions from Tables XVII. and XVIII. must be checked in Table XIX., else the large variation of one individual may offset the slight opposite tendency of the other four and make it appear that the group-preference waxes or wanes with respect to that advertisement.

From these data I would conclude that advertisements Nos. 2, 3, 16, 22, 26, and 49 wax and Nos. 1, 6, 8, 10, 11, 12, 19, 27, 28, 31, 32, 33, 36, and 38 wane with the women. The former group consists of pleasing "artistic" advertisements while the latter are not specially "artistic." Two women, to whom I showed these groups, *felt* that there was a decided difference between the advertisements in the two groups and that it was only natural that the former should wax and the latter should wane. They were utterly unable to give any reasons for their feeling, however. But with the group of waxing advertisements (Nos. 2, 7, 24, 26, 34, 35, and 36) and the group of waning advertisements (Nos. 1, 3, 6, 8, 11, 16, 18, 20, and 43) of the men there does not seem to be any reason or feeling for the two groups. Neither does a study of the six advertisements, which clearly waxed or waned for both men and women (Nos. 2, 26, 1, 6, 8, and 11) show any reasons for their rise or fall in preference. A careful study of the two groups of waxing and waning advertisements for each subject failed to show any general principle, except with the one subject C, a married man. Here all the advertisements depicting women waxed.

The failure to obtain definite results may be due to any one of three reasons: First, advertisements do possess an intrinsic value which is constant to the same observer at all times under the same conditions. Repetition then does not affect its "pulling-power." Second, the method of experimentation is not adequate, the waxing and waning effect which was noticed being due merely to fluctuations

⁶ These tables are on file in the Psychological Laboratory of Columbia University.

in the judgments. Third, the advertisements combine various elements, some of which tend to wax and some to wane. Under such conditions there would be extreme difficulty to determine what these elements are and their tendencies from such complex advertisements. Further work should be carried on but using very simple "lay-outs."

SECTION 2. *The Relative Merit of the Fifty Advertisements*

After obtaining the above results regarding the effect of repetition on the value of advertisements, it was deemed worth while to study the relative merits of these advertisements as to "pulling-power." In all the previous experiments, as has been shown, the great defect in the value of the results has been the inability to ascertain the actual merit of any advertisement. The results in every case were relative. We could determine which advertisement in the set was the most effective, we could even state how many chances there were in a thousand that the first advertisement was superior to the second. But in no case could we judge the actual superiority of the first advertisement over the second; in other words, how much more business the first would bring than the second. The following experiment is an attempt to solve this question.

The ten subjects used in the repetition-experiment were retained and fifteen others, ten men and five women, were employed. Of the fifteen men five were married and had children. All of the twenty-five had had some experience in experimental psychology—such were selected in the hope that valuable aid might be obtained through introspections. The subjects represent fairly well the class of people who are appealed to by the advertisements, except that they lack a group of married women.

The following typewritten directions were given to the subject together with the fifty advertisements.

DIRECTIONS

Sort these 50 advertisements according to the order in which *you would buy the soap.*

Take for granted that each advertisement represents a different make of soap.

Arrange them into as many piles as you desire; but so arrange them that the difference in superiority of one pile over the next is "just noticeable."

If the superiority of one advertisement over the next is more than "just noticeable," leave as many gaps (empty piles) as you feel are needed to indicate this superiority.

After the sorting was completed a second set of directions was given them, as follows:

DIRECTIONS No. 2

Designate the pile, if there is such, which has no appeal to you at all. The piles above it should then all have an increasing appeal for you to buy their soap and the piles below it should have an increasing negative effect upon you (*i. e.*, prejudice, distaste, or disgust with the soap).

Note down, as best you can, the reasons why you have thus arranged the advertisements. That is to say, what were the guiding principles in the sorting of the advertisements.

The subjects sorted the advertisements into piles ranging in number from six to thirty-seven. The highest pile was arbitrarily assigned the value of 100 and the pile, which the subject designated as having no appeal, was assigned the value of zero. The piles between these two were assigned values proportionately. The piles below the "no-appeal" pile were assigned correspondingly negative values. The values assigned to the advertisements in the following tables are thus figured from (1) the advertisements which the subject considered the best in the set and (2) from the advertisements which the subject considered of no appeal. Considerable care was taken in every case that each subject understood the meaning of "no-appeal," so that as far as possible it had the same content for all twenty-five subjects. It is believed that this zero point does actually approximate the zero point of appeal in advertisements. The 100 mark, of course, simply marks the best advertisement in the fifty. Whether that point is below perfection and, if so, how far must remain unanswered in this report. But from a business point of view the difference between the *ideal* advertisement and the *best* advertisement is of far less moment than the questions—"which is the best advertisement"; "how much better is it than the others in use"; and "why is it better."

The results from the twenty-five subjects are set forth in Table XX. The median judgment with its quartile⁷ is given. The first column lists the advertisements by number in the order of the medians of the twenty-five subjects. Then follow the results from the fifteen men, the ten women, and finally the combined results of the two groups. The fifth section gives the position of each advertisement as determined by Mr. Edward A. Olds, Jr., of the Packer Manufacturing Co., as based on the firm's experience. Here, as above, the best advertisement is graded 100, the advertisement of

⁷ The quartile was calculated by averaging the distance from the median in both directions to the point which included 25 per cent. of the cases. As shown later, the distribution of judgments in this experiment is approximately symmetrical: hence, the quartile gives a very close approximation to the P.E. See Thorndike, "Mental and Social Measurements," pp. 78-79.

TABLE XX

GRADES AND DEVIATIONS IN THE JUDGMENT OF PACKER'S TAR SOAP
ADVERTISEMENTS

Ad. No.	15 Men		10 Women		25 Subjects		Packer Mfg. Co.	B.-R. Agency Av. P.E.
	Med.	Q.	Med.	Q.	Med.	Q.		
11	84	18	75	40	77	20	85	62 17
12	84	20	45	44	75	31	31	31 17
29	67	26	70	28	67	23	71	36 29
21	71	21	48	22	67	26	86	4 5
13	60	19	54	42	60	24	81	2 3
48	60	20	44	21	54	21	100	33 37
31	53	19	50	49	53	18	91	36 10
43	60	25	40	21	53	23	94	56 31
3	60	31	41	33	53	30	70	0 0
2	60	21	42	30	50	23	42	23 12
10	60	18	40	44	50	26	76	6 6
9	50	14	53	52	50	28	77	18 10
45	70	21	37	39	50	31	65	52 28
42	78	38	20	39	50	40	87	65 38
49	50	21	39	29	47	26	23	0 0
5	17	29	61	26	47	31	75	4 5
15	47	38	31	21	45	27	21	21 23
47	45	17	29	38	40	20	63	0 0
50	47	17	38	47	40	23	44	0 0
30	45	16	22	62	40	29	68	— 7 10
46	40	32	20	39	40	34	66	18 21
6	41	22	23	42	36	25	79	0 0
20	53	21	9	38	36	27	69	0 0
40	35	27	32	30	35	28	73	6 21
18	50	22	— 11	35	35	35	19	— 17 9
23	32	19	37	24	34	20	84	46 30
16	32	19	42	26	34	24	39	0 0
22	32	19	50	23	34	28	80	— 8 9
1	45	24	20	31	33	27	48	0 0
17	33	22	39	30	33	27	13	— 17 9
34	45	22	— 28	47	33	42	64	19 13
14	31	20	6	47	30	34	60	8 7
32	59	27	13	33	30	34	28	— 25 0
24	60	34	5	38	29	41	16	0 0
26	40	32	— 6	42	28	47	40	0 0
38	58	20	0	6	27	30	56	8 9
44	50	33	4	20	27	32	82	26 9
39	77	34	4	35	27	48	88	52 29
4	25	30	14	29	25	32	67	0 0
28	52	35	— 9	45	23	47	78	81 3
25	20	37	10	11	20	31	34	— 8 9
41	24	15	— 26	44	18	29	50	0 0
36	30	22	— 17	25	17	29	38	— 8 9
37	18	19	— 34	47	11	28	46	38 21
35	18	23	— 28	47	11	29	58	— 8 9
33	16	20	— 11	42	11	29	25	0 0
7	10	20	— 2	46	10	24	6	— 17 9
8	20	19	— 40	47	10	29	0	— 17 9
27	0	7	— 6	36	0	7	— 12	— 17 9
19	0	25	— 43	30	— 10	27	— 6	— 17 9



“no-appeal” as zero, while the intervening advertisements were assigned proportionate values. It is scarcely necessary to repeat that the results of the Packer Manufacturing Co. are not based upon carefully compiled data but only upon the judgment of the firm based on their business experience. Any one familiar with advertising knows that such data have not been compiled for any extensive set of advertisements, let alone a series of fifty extending over twenty years of service. If such data did exist, they could not be used to their full face value, as an advertisement of twenty years ago might have been very effective then and be out of date to-day. The change of style of dress in the cut would alone seriously impair its value. The sixth section of this table gives the average position of each advertisement with the P.E. of that position from the arrangements of three advertising men in the Blackman-Ross Advertising Agency, which is now handling the Packer Manufacturing Co.’s business. Their arrangement was based on an “attention-value” basis instead of “appeal” or “pulling-power” value. Besides, each of the three men assigned values only to about one half of the fifty advertisements. The negative values which they assigned are much more reliable than the positive due to the fact that their attention was especially directed to the poor advertisements. The above five *orders* of preference are also shown in Table XXI.

All references to the order of preference of these fifty advertisements will be based on the median judgment, unless specially mentioned as based on the average, except with the order of preference of the three advertising men of the Blackman-Ross Agency where the average was used instead of the median. In this one case it was manifestly a fairer measure. Besides the reasons already mentioned in Chapter II. as to the superiority of the median over the average with data secured by the “order of merit method” we have here the difficulty of combining a set of data (from the 15 men) of very much less range or variability of judgment with one of great range (from the 10 women), especially in the negative direction. To average such data together is to give in a large number of cases very great value to one or two results far below the zero point, which, if anything, should be discounted. To reject such extreme variates as is done in many physical measurements, as for example under Chauvenet’s criterion, would only defeat the object of this study. What is wanted is the position the majority of people would assign and not the average position of good, bad, and indifferent judges. This the median clearly gives. That there is no great difference in the relative order of the advertisements when determined by the aver-

TABLE XXI

"PULLING-POWER" VALUE OF 50 PACKER'S TAR SOAP ADVERTISEMENTS

(Numbers throughout table refer to Number of Advertisement in the Fifty.
See photos, Plates V to IX.)

Grades

-50	-40	-30	-20	-10	0	+10	+20
15 men subjects							
					19 27	5 7	35 33 37 25 41
19 8	37	34 35 41	36	18 33 28 27	26 7 38	39 14 44 24	20 25 4 32 46 42 1
10 women subjects							
19	27	33 7 35 8 37	28 36	17 7 38	24 25 4 32 46 42 6	36 41 25 1	28
25 subjects							
27	19	8	7	17	24	18 15 49	
Blackman-Ross Advertising Agency	7 8 17 18 19 32	22 25 30 35 36	26 33 4 41 6 47 16 49 20 50 24 13 21 40 38	3 4 6 14 10 14 46 34	1 4 15 2		

age judgment or by the median judgment is shown by the following three correlations:

Correlation between average and median judgment of the 15 men + .93

Correlation between average and median judgment of the 10 women + .89

Correlation between average and median judgment of the 25 subjects + .87

The higher ratings in Tables XX. and XXI. of the advertisements by the Packer Mfg. Co. are due simply to the fact that but one man rated them, while the lower ratings in the other columns are due to the fact that they represent the average of a number of ratings in which all did not agree as to the best advertisements.

The following advertisements were chosen for a study of the distribution of the judgments: No. 29 (64.1), No. 48 (54.4), No. 39 (44.4), No. 40 (34.2), No. 4 (24.4), No. 35 (13.9), No. 8 (2.2), and No. 19 (-5.9). The positions given here are based on the average judgment. The actual distribution of the judgments of these advertisements is shown in Table XXII. and parallel to it is shown the

TABLE XXI

"PULLING-POWER" VALUE OF 50 *PACKER'S TAR SOAP ADVERTISEMENTS*
(Continued)

+ 30	+ 40	+ 50	+ 60	+ 70	+ 80	+ 90	+ 100
			2				
			3				
			10				
14		1	9				
16		30	18				
22	26	34	15 44	20	32 43		
4	36 23 17 40	46 6	47 50 49 28 31	38 48	29 45 21	39 42	11 12
30 47 40	23 17 2 45 43 3	50 49 16 48 12 21 31	22 9 13	5	29	11	
	1		2				
26	17 6 30		9 3				
38 14	22 18 46		10 31				
39 24	23 20 47		5 42 43		21		
4 44 32	34 40 50	15 49 45	48	13	29	12 11	
33 32	12 25	36 26 2 50 37	1 41	38 35 14 47 45 46 30 20 29 40	34 4 3 10 28 22 44 23 42 39	5 9 6 13 11 21	31 43 48
44	12 48 31 37	23	39 45 43	11 42		28	

theoretical distribution as determined with the use of a table of values of the normal probability integral corresponding to values of x/σ . σ in this case was obtained from the A.D. of the average of the twenty-five subjects ($\sigma = 1.25$ A.D.). From the table it is clear that the distribution of judgments follows the probability curve distribution. With a larger number of cases the two would, no doubt, coincide. We may, therefore, assume that the various relationships of the normal curve of distribution hold throughout this series of judgments. (See Chapter II., Section 4, for a further study of these eight advertisements.)

Table XXIII. gives a number of correlations which indicate the resemblance between the five orders of preference of the fifty Packer's Tar Soap advertisements. None of these coefficients of correlation have been corrected for attenuation; hence the true coefficients are in every case somewhat higher than those given here.

SECTION 3. *A Discussion of the Several Advertisements*

There are nine so-called "copy-ads." among the fifty. They may be divided into three classes: (1) Five that are set off with pine trees

TABLE XXII

DISTRIBUTION OF 200 JUDGMENTS OF SOAP ADVERTISEMENTS

Distance from Median	Actual Frequency	Theoretical Frequency
+ 120	100	100
+ 110	100	99
+ 100	100	98
+ 90	99	97
+ 80	96	95
+ 70	94	92
+ 60	88	87
+ 50	84	80
+ 40	74	70
+ 30	50	56
+ 20	29	40
+ 10	20	21
Median	0	0
— 10	19	21
— 20	38	40
— 30	54	56
— 40	68	70
— 50	79	80
— 60	86	87
— 70	92	92
— 80	95	95
— 90	97	97
— 100	98	98
— 110	99	99
— 120	100	100

or pine cones as borders to the copy or similar effects (Nos. 11, 12, 29, 2, and 10); (2) two that display a small cut of a man shampooing at the top of the page (Nos. 42 and 39); and (3) two that are only set off with a border (Nos. 14 and 26). (No. 26 does have a few

TABLE XXIII

RELATIONSHIP EXPRESSED IN COEFFICIENTS OF CORRELATION BETWEEN THE FIVE ORDERS OF PREFERENCE AS TO THE VALUE OF APPEAL AMONG FIFTY PACKER'S TAR SOAP ADVERTISEMENTS

	r.	P.E.
Between 15 men and 10 women.....	+ .53	.07
Between 15 men and 25 subjects.....	+ .74	.04
Between 15 men and Packer Mfg. Co.....	+ .52	.06
Between 15 men and Blackman-Ross Agency.....	+ .59	.06
Between 10 women and 25 subjects.....	+ .87	.02
Between 10 women and Packer Mfg. Co.....	+ .53	.07
Between 10 women and Blackman-Ross Agency.....	+ .31	.09
Between 25 subjects and Packer Mfg. Co.....	+ .52	.07
Between 25 subjects and Blackman-Ross Agency.....	+ .51	.07
Between Packer Mfg. Co. and Blackman-Ross Agency.....	+ .64	.04

30 — 18

Packer's Tar Soap

OF EVIDENCE

A CHAIN

For many years Packer's Tar Soap has been the favorite of the men who work in the timber camps. It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

25 — 41

For many years Packer's Tar Soap has been the favorite of the men who work in the timber camps. It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

MADE FOR THE SUN
PACKER'S TAR SOAP
MADE FROM THE PINES

Packer's Tar Soap!

Directions: To the strongest, hottest sun, put the scratches that have made
PACKER'S TAR SOAP
the strongest soap in the world. It is a
soap that is not only good for the skin, but it is also a
valuable medicine. It is made of the best materials and is a good soap for the hair and skin.

24 — 34

Conservation

Nature's gift of hair is
well preserved by Packer's Tar Soap.

For many years Packer's Tar Soap has been the favorite of the men who work in the timber camps. It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

MADE FOR THE SUN
PACKER'S TAR SOAP
MADE FROM THE PINES

29 — 4

For many years Packer's Tar Soap has been the favorite of the men who work in the timber camps. It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

MADE FOR THE SUN
PACKER'S TAR SOAP
MADE FROM THE PINES

28 — 40

Packer's Tar Soap

For many years Packer's Tar Soap has been the favorite of the men who work in the timber camps. It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

MADE FOR THE SUN
PACKER'S TAR SOAP
MADE FROM THE PINES

27 — 49

Packer's Tar Soap

For many years Packer's Tar Soap has been the favorite of the men who work in the timber camps. It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

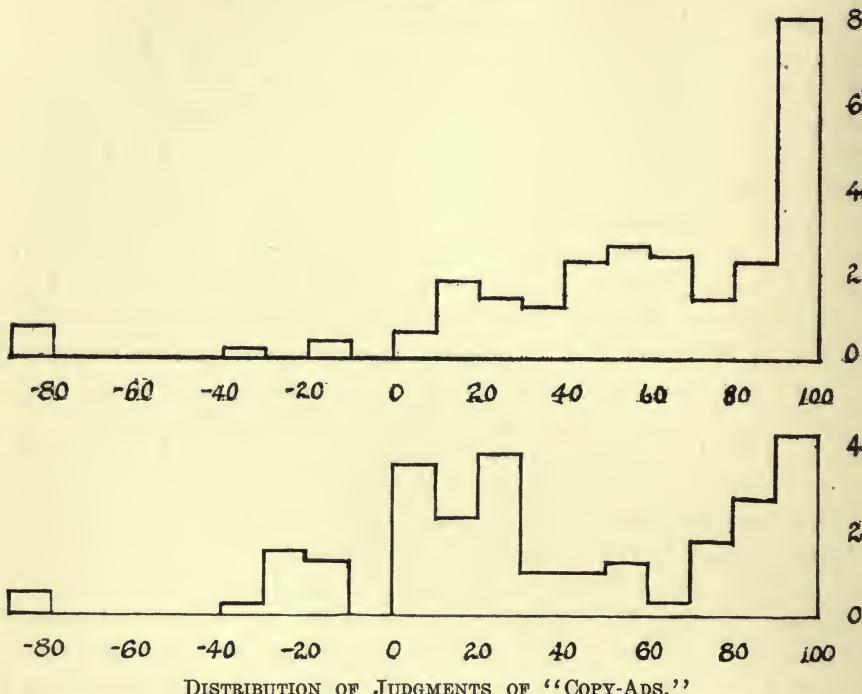
It is a soap that is not only good for the skin, but it is also a valuable medicine. It is made of the best materials and is a good soap for the skin.

MADE FOR THE SUN
PACKER'S TAR SOAP
MADE FROM THE PINES

26 — 39

needles in the background but, I believe, they are too hazy to have any appreciable effect.) The first five are assigned positions one, two, three, ten, and eleven, respectively, the second group are assigned positions thirteen and thirty-six, and the third group thirty-two and thirty-nine. Advertisement No. 39, which is judged thirty-sixth in the fifty, should here properly be ranked about eighteenth. The judgments of this advertisement are very markedly bimodal: twelve judgments lie between 100 and 70 and the remaining thirteen between 27 and —22. The median here is subject to a great error in being assigned to the thirteenth judgment which is 27. This is shown in the very large P.E. of the median, the largest of the fifty advertisements, *i. e.*, 10 places, or in other words, the chances are even that the true median will lie between the twenty-second and forty-third position. If the average of the five central judgments is taken it receives a rank of 43 which gives it eighteenth place. If averages instead of medians were used in this study No. 42 would receive tenth position and No. 39 eleventh. In that case the five "pine-copy-ads." receive first, second, third, sixth, and eighth. In any case the three classes of copy-ads., as stated above, are ranked differently by the twenty-five subjects. If the judgments of the five "pine-copy-ads." are shown in a diagram according to their distribution and the judgments of the other four are similarly shown as in Table XXIV. we see that with the former we have a distribution with an undistributed upper end while with the latter group we have a bi-modal distribution. We have here only another instance of the fact already pointed out in Chapter III. that a copy-ad. or a picture-ad. will be ranked high by about half of the people and low by the other half. The four advertisements of the second group consist practically entirely of "copy"—hence the bimodal distribution of the judgments. Of these No. 42 and No. 39 are set off by a small cut and we find that they rank much higher than the other two. The five "pine-copy-ads." have enough of "picture-effect" so that there is no decided group judgment against them. To put this fact in other words, the five produce a pleasing effect through the pine tree or pine cone borders, the reader's attention is attracted to them and he unconsciously glances through their copy. Once having done so they are judged on the basis of their copy. The other four have no such pleasing bait to attract the attention and consequently are read by only that class of people who prefer reading-matter to pictures. The opposite class glance at them and turn to the next one. Subject Dod was one of the subjects that ranked the five "pine-copy-ads." high and No. 14 and No. 26 low. He gave as his reason "the lack of a picture." I am unable to see any particular difference

TABLE XXIV



Upper diagram represents distribution of "pine-copy-ads" (Nos. 2, 10, 11, 12, 29). Lower diagram represents distribution of "copy-ads" (Nos. 14, 26, 39, 42).

in appeal in the "copy" of the nine advertisements and would conclude that their difference in appeal is to be explained as given above. The "pine-copy-ads." should be approximately twice as effective in selling soap as the "copy-ads." without these decorations. (Eighty per cent. of the judgments of the former are higher than the median position of the latter.)

Advertisements No. 11 and No. 12 are undoubtedly first and second, No. 29 and No. 21 third and fourth, and No. 13 fifth according to these figures. Advertisements Nos. 48,⁸ 31, 43, 3, 2, 10, 9, 45, 42, 49, and 5 certainly rank between sixth and seventeenth place. Advertisement No. 15 is given seventeenth position, but its P.E. of position extends from tenth to twenty-first. There is also a slight chance that No. 46 (twenty-first) might displace No. 49 and No. 5 and be rated fifteenth. The above group, eliminating the "copy-ads." already considered, consist of three fourth page cuts and a few sentences of copy with the exception of No. 31 and No. 45 where

⁸ Note, however, the discussion of this advertisement on page 75.

the cut occupies but one half of the page. The majority of them depict children in various positions. No. 31 and No. 9 depict the head of a pretty woman, No. 45 a man shampooing his hair, and No. 15 three men in a canoe. The last three of this group, including No. 15, are certainly irrelevant cuts; the remainder suggest the soap either directly or indirectly. Reference to Table XXI. makes their relative rank clear.

Though the pictures of No. 21 (Winter Chaps) and No. 13 (Emblems of Purity) are actually irrelevant, yet the two subscriptions associate the pleasing effect of the picture with the soap. Mr. Edward A. Olds, Jr., of the Packer Manufacturing Co., is quoted in *Printer's Ink*⁹ as follows: "I think our two little 'winter chaps' is one of our best pieces of copy. It has at least aroused as much human interest as any that I know of. I have been stopped on the street by acquaintances and asked who those boys are, where they live, and all sorts of questions as to their financial circumstances." Scott¹⁰ styles it, "a full-page advertisement possessing great attention value" and states that in one experiment of his it was mentioned more than any other. Advertisement No. 13 is a publicity advertisement for Easter time, yet it is evident that it is one of the best of the fifty. The suggestion of "purity, sweetness, and delightful cleanliness" has already been shown to be the strongest appeal for soap among college students (see Chapter VI.).

Advertisements No. 48 and No. 43 are ranked first and second by the Packer Manufacturing Co. But the Blackman-Ross Advertising Agency rate them eleventh and fourth respectively. The data here restrict them to sixth position or lower. There is no doubt that such children-appeals stand very high among women. As there were no older women among the twenty-five subjects it may be that the position assigned them here is too low when all classes of consumers are considered. The data from one hundred college students as to the relative merits of eight of the fifty Packer's Tar Soap advertisements, which are given on page 13 would imply that No. 48 should be given at least third place.

Commencing with No. 47 we have twenty advertisements within the grades eighteen and twenty-seven. Advertisement No. 47 ranges¹¹ between eighteenth and twenty-third position; No. 50 between seventeenth and twenty-fifth; No. 30 between seventeenth and twenty-

⁹ G. H. Whitney, "The Personalities of Advertising Models," *Printer's Ink*, December 15, 1910.

¹⁰ W. D. Scott, "The Psychology of Advertising," pp. 164-65.

¹¹ I have employed this term to designate the deviation equal to the probable error of the median, *i. e.*, the chances are more than even that the true median judgment does not lie outside these limits.

eighth. The next ten range between eighteenth and thirty-fifth and the next seven between twenty-second and fortieth. Evidently there is little difference between the twenty in appeal. The advertisements are so complex that it is well-nigh impossible to state the principles underlying their respective merits. Only such as are particularly striking to the writer will consequently be mentioned. As the data from which these deductions are taken, together with the advertisements, are given here it is possible for the reader to review the deductions himself and also to make any others as he may see fit.

Advertisement No. 31 shows a half-page cut of a pretty girl with flowing hair while No. 30 present a much larger cut of the same girl. The former has several sentences of copy while the latter has only a few words in the form of headings. Subject Woo prefers No. 31 as "better because of the copy." As the former is ranked between sixth and fourteenth and the latter between seventeenth and twenty-eighth there is probably a difference of ten places between them. From the scale of Table XXI. the former is 32 per cent. stronger in appeal. Advertisement No. 9 is very much on the same line as No. 31 and ranks about the same in value.

Advertisements No. 45, ranked thirteenth, and No. 40, ranked twenty-fourth, depict a man shampooing his hair. The consensus of opinion in the introspections was that the head of the former was superior to the latter. These subjects expressed themselves very emphatically that they did not like the rhyme

"His Greatest Delight
Every Saturday Night"

and ranked the advertisement low because of this dislike, although they all liked the face very much. It had a "cheapening effect" and evidently aroused distrust or suspicion—the opposite of confidence. It is interesting to note that Mr. E. A. Olds, Jr., stated that they had discontinued the use of the phrase because of expressed dislike to it. These two advertisements and No. 42 and No. 39 are the only ones with a direct appeal to men to shampoo with Packer's Tar Soap. I believe a combination of the cut of No. 45 or No. 40 and the copy of No. 42 or No. 39 would form a much stronger advertisement than any one of the four as they stand now. The attempt at expressing pleasure—"delight" or "satisfaction"—should be better developed and incorporated in the advertisement. The portrayal of pleasant emotions is probably the most difficult of all appeals to make, but it stands to reason that when well done it must bring results.

The three kitten-ads., Nos. 23, 16, and 22, are ranked about twenty-seventh. As will be pointed out later, they were ranked high

Packer's Tar Soap



PURE AS THE PINES

CLEANSING, REFRESHING, ANTISEPTIC
THE STANDARD
HAIR AND SKIN
SOAP

MADE IN THE VILLAGE OF PINEWOOD, PENNSYLVANIA

35—45



FIVE YEARS' GROWTH
I send you my picture which represents a growth of hair of but five years, thin you may see what Packer's Tar Soap has done for me. Mrs. M. D. Lunn, Union, Chez, Pennsylvania, who has used it for five years.

Packer's Tar Soap

PURE AS THE PINES

34—31



PACKER'S STAR SOAP

A Refreshing Shampoo with

PACKER'S TAR SOAP

not only cleanses the hair, but imparts vigor to the whole scalp. Its gentle, creamy lather rubbed into the scalp with gentle and continued manipulation softens and removes all dandruff and scrofulous scacles. Its antiseptic and tonic action imparts vigor to the glandular structures, which nourish and enliven the hair, thus stimulating its growth and maintaining its vitality.

REAL MANUFACTURE
FOR PRECIOUS HAIR CARE.

IT IS AS THE PINES
POSITIONS. Long-Lasting. Adhesive. High-Grade. Yellow Soap.

THE PACKER CO., South St. & Fulton St., New York

Packer's Tar Soap



LIVIDURANT HAIR—
grown, while delicate, an otherwise
sickly when the hair, and skin are
preserved by systematic shampooing with
PACKER'S TAR SOAP

33—44

Packer's Tar Soap

Pure as the Pines



EVIDENCE

acculmulates of the superiority of Packer's Tar Soap for cleansing the hair thoroughly and keeping it soft, lustrous and healthy.



Packer's Tar Soap

PURE AS THE PINES
THE COTTER & CO., NEW YORK

31—8

Packer's Tar Soap

PURE AS THE PINES



40—25

39—36

38—35

37—46

by the women and low by the men. Evidently they rank among the first fifteen for women—having high attention-value. Two of the women, however, maintained that they suggested Bon Ami. To the extent that this suggestion holds true they are not very good advertisements for Tar Soap. The copy emphasizes that Packer's Tar Soap is good for prickly heat, etc. If the advertisements had been sorted in summer instead of in November these appeals might have been ranked somewhat higher.

The last twelve advertisements of the fifty appeal on the whole to women to use the soap. No. 35 gives a testimonial of Mary Tayloe as to the great use of Packer's Tar Soap. A number of the subjects would give no credence to the testimonial: "It was easy enough to fake," or "I have no respect for testimonials, I think they are all fakes." The majority felt that these advertisements were over-drawn, exaggerated. Such comments as these were common: "Too much hair, a fake; seems so after using several hair-dopes," referring to No. 30. "No. 34 must be a lie," or "'Five years' growth'—she probably always had it." "Wouldn't read it," referring to No. 25. "Over-done, doubt the hair-growing property," referring to Nos. 8, 33, 34, 37, and 41.

No. 27 is ranked without doubt forty-ninth. The women, however, place it above several advertisements which especially appeal to women through cuts of beautiful hair, etc. In other words they are more prejudiced by the latter than by it. No. 19 is rated last by all the three groups.

Advertisement No. 28 is rated first by the Blackman-Ross Agency and thirteenth by the Packer Manufacturing Co. It is rated fortieth here. It is a direct appeal to men and, as pointed out later, is rated much higher by them than by the women. This is one of the noticeable differences between the arrangement of the twenty-five subjects and the advertising men.

Advertisement No. 1, ranked twenty-ninth, stands approximately in the middle of the group of fifty, whether considered according to relative position or actual position on the scale. Its appeal that even in India is Packer's Tar Soap sold implies that, therefore, it must be a good soap. This appeal of "Sold Everywhere" has been shown in Chapters V. and VI. to rank fourteenth out of a possible twenty for breakfast foods and seventeenth out of a possible twenty for soaps among college students. Its position in this set is another confirmation of those chapters.

From these results it would appear that "copy-ads." decorated by a border of pine trees or pine-cones appeal most strongly to college people. Advertisements with good pictures of the soap in

actual use and with simple language with no suggestion of exaggeration would stand equally high. Relevant pictures of children rank high. How they would compare with relevant pictures of pretty women can not be determined from this study.

The appeal to use the soap to aid the growth of hair would apparently be very weak. However, the general style of the advertisements suggesting this thought and the cuts used are fifteen and twenty years old. What would be the actual value of the appeal in a modern advertisement must be left to future experiments, as the Packer Mfg. Co. have not used "copy" of this nature in recent years.

SECTION 4. *Sex Differences in the Judgment of the 50 Advertisements*¹²

An inspection of the diagram of Table XXI. shows that the range of judgments for the men is much less than for the women, *i. e.*, from +84 to 0 for the men and from +75 to —43 for the women. Both have 55 per cent. of the entire range below the median judgment. But the average A.D. of the medians of the individual judgments for each advertisement for women is 69 per cent. greater than for the men. This is the more striking as the women would apparently be a much more homogeneous group than the men as they were all juniors or seniors in Barnard College and within a very few years of each other in age, while the men include graduate students and professors and vary at least twenty years in age. This difference in variability is shown not only in the average A.D., but also in a comparison of the respective average deviations of each advertisement. Table XX. shows that with only seven advertisements out of the fifty is the quartile with the women less than with the men. This is not a result of the less number of female as compared with male subjects for we have only eleven advertisements that show a lower P.E. of the average among the women when we compare the average position that 5 men assign with the similar position of 5 women. A comparison of the average probable errors of the two groups shows us that the P.E. of the women averages 69.7 per cent. greater than that of the men. We have here then three interesting facts in regard to sex-difference in the judgment of advertisements: (1) The absolute range of difference of judgment for the women is 71 per cent. greater than for the men. (2) The women rank 13

¹² It should be borne in mind that the women were all undergraduates and the men were all college graduates and average at least seven years older. It is thus actually a sex difference plus an age difference. However, the results of Chapter VI. show that older women rate soap advertising appeals almost exactly as do college women. Consequently, I do not believe that the question of age has much effect here.

advertisements as negative in appeal while the men do not rank any—the 13 occupying 36 per cent. of the entire range of the women. (3) The variability of the individual judgments of the women is 70 per cent. greater than that of the men.

Why we should obtain apparently conclusive evidence in Chapter VI. that women are less variable in their preference for soap advertising appeals and here, on the other hand, apparently just as conclusive evidence to the contrary is difficult to understand. It is true that the methods employed in the two chapters are different. But if different methods can give exactly opposite results as to variability, they can be of little value as to its determination. Personally, I believe, that the situation is this. The results of Chapter VI. show less variability among women than men. The results of Chapter VII. show that when women are given an equal opportunity with men to rate appeals (advertisements) they are able to classify their dislikes as readily as their preferences, which the men do not do. Such a condition naturally results in a greater total range (where methods of experimentation similar to those in this chapter are used) and consequently in a seemingly greater variability. A careful analysis of the data will not really show greater variability of judgment among the women. What it does show is that women have more and greater dislikes than men and are surer of them.

There are seven advertisements that the women *actually* rank higher than the twenty-five men and women together. They are advertisements Nos. 29, 9, 23, 5, 16, 22, and 17. The first three, however, do not differ by as much as the P.E. of the median of the twenty-five or of the fifteen men. With only the last four can it be said that the women actually rank them higher on the scale than the twenty-five. Only four of these seven do the men actually rank lower than the median of the twenty-five, *i. e.*, Nos. 5, 23, 16, and 22. And only with the first of these four is the difference greater than the P.E. of the median of the twenty-five. The *order* of the twenty-five then does not vary with the exception of No. 5 for the men and Nos. 5, 16, 22, and 17 for the women by more than the P.E. of position from the order of either men or women.

From the data in Table XX. the P.E. of the obtained median from the true median may be obtained. (P.E. median obt.—true = quartile/ \sqrt{n} , n equaling the number of subjects.) Turning now to Table XXI. we can draw up a schedule stating not in terms of position on the scale but in terms of relative position among the fifty advertisements the probable range of each advertisement. For example, the median position of No. 5 for the fifteen men is 17 and for

the ten women is 61. The quartiles, respectively, are 29 and 26. Then the P.E. of the above medians are $29/\sqrt{15}$ and $26/\sqrt{10}$ or 7.5 and 8.2. It is evident then that the chances are even that the true median position of No. 5 for the men lies between 24.5 and 9.5 and for the women between 69.2 and 52.8. Turning now to Table XXI. we find that the forty-first to forty-eighth advertisements in the series for the men lie between these limits, while the second to the fifth advertisements lie for the women similarly between the second set of limits. Consequently we are certain that the difference between the assigned positions of 17 for the men and 61 for the women is greater than the P.E. of their positions.¹³ Only such sex-differences are considered here.

By the above method we find that the following advertisements are ranked higher by the men than by the women: Nos. 12, 42, 20, 18, 34, 32, 24, 38, 44, 28, 41, and 36. The following are ranked higher by the women than by the men: Nos. 5, 40, 33, 16, 22, 17, 25, 7, and 27. Four of the above advertisements (Nos. 12, 29, 42, and 5) are ranked above the sixteenth position by the twenty-five subjects, the remainder are ranked below the twenty-second position in the fifty. It is evident that the two sexes nearly agree about the best advertisements but disagree about the poorer ones.

Among the advertisements preferred by the women over the men we have the three "kitten-ads." (Nos. 16, 22, 23); the "baby in the satchel-ad." (No. 5); the "little boy in the cart-ad." (No. 17); the "tired tourist-ad." (No. 7); and the "letter to Santa-Claus-ad." (No. 27). The main point of all these advertisements is their irrelevancy of cut. Among the twelve advertisements preferred by the men over the women only two can be grouped under the heading of irrelevancy—No. 20, a mother and naked child, and No. 36, two children. This preference for the irrelevant among women confirms the early work of Gale upon attention-value. He states that "the female attention was more susceptible to irrelevancy, as it was also to cuts, than was the masculine attention."¹⁴

¹³ Just how great a difference does lie between such respective positions can be determined from the following formula, P.E. of difference between Advertisement A and B =

$$\sqrt{\left(\frac{\text{P. E. t. med.-obt. med. A}}{\sqrt{n}}\right)^2 + \left(\frac{\text{P. E. t. med.-obt. med. B}}{\sqrt{n}}\right)^2}.$$

However, for all practical purposes in this study a difference which is so great that the P.E. of the true-obtained median of one position does not overlap that of the other is sufficient as an indication of an actual difference in merit.

¹⁴ Cf. Chapter I., p. 4.

Of the advertisements preferred by the men we have the following "copy-ads.": Nos. 12, 42, and 39; and the following half "copy" and half "cut-ads.": Nos. 38, 44, 36, and perhaps 28. Only No. 25 among the advertisements preferred by the women could be considered as approximating a "copy-ad." and there the main interest, apparently small, I should judge, would lie in the three small cuts. Advertisements Nos. 24, 32, and 28 appeal directly to men, for they consist of cuts of men and appeal to the preservation of their hair. But No. 40 preferred by the women is also a direct appeal to men. Advertisements Nos. 34 and 41 are direct appeals to women to use the soap and depict women shampooing or combing the hair. All the other advertisements of this type (*e. g.*, Nos. 33, 35, 37, 8, etc.) were ranked higher by the men than by the women although the differences are not great enough to exceed the P.E. The explanation of this phenomenon lies in the fact that in sorting any material in the "order of merit" method the tendency on the part of nearly all subjects is to arrange the first half of the material upon some criterion and then to arrange the remainder upon the basis of a criterion logically opposite to the former. That is to say, this series of advertisements was arranged with the criterion of "suggestion-to-buy" and also with the criterion of "distaste" or "prejudice-against-buying." The men didn't know whether women's hair could be benefited by the use of Packer's Tar Soap and didn't care. They merely threw all such advertisements down near the bottom of the list but not clear to the bottom. The very bottom was reserved for those advertisements which they were sure were no good. But the women were sure of the merits of such appeals and consequently placed them clear at the bottom. I say "sure" because the majority expressed themselves very forcibly in their introspections that they didn't believe any soap would grow hair. It is interesting to note in this connection that the copy of all these advertisements emphasizes the "efficacy of Packer's Tar Soap as a pure, antiseptic cleanser for shampooing" and "keeping the hair soft, lustrous, and healthy," etc. No where do they make the claim that its use makes the hair grow. But because of the frequent display of women's hair by patent medicine advertisers to-day, the subjects, especially the women, jumped at the conclusion that the same claim was being made here—that the soap would grow hair—and they did not bother to investigate further. Hence their introspections along that line. It is also of interest to note that these particular advertisements have not been used for several years because of this situation—the patent medicine men having ruined this appeal by their gross exaggerations.

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